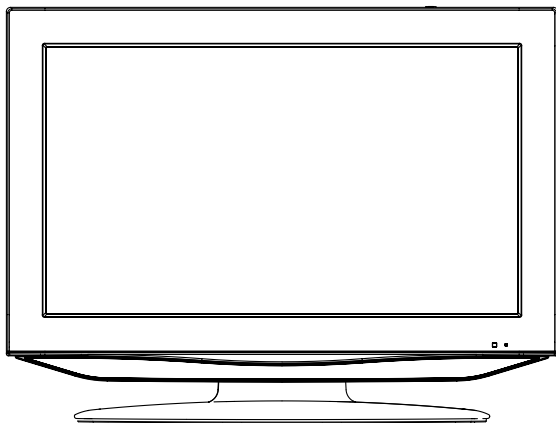


# SHARP SERVICE MANUAL



## LCD COLOR TELEVISION/ DVD VIDEO PLAYER

MODEL **LC-26AD22U**

In the interests of user-safety (Required by safety regulations in some countries) the set should be restored to its original condition and only parts identical to those specified should be used.

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SHARP CORPORATION

This document has been published to be used for  
after sales service only.  
The contents are subject to change without notice.

## CAUTION

THIS LCD COLOR TELEVISION EMPLOYS A LASER SYSTEM.

TO ENSURE PROPER USE OF THIS PRODUCT, PLEASE READ THIS SERVICE MANUAL CAREFULLY AND RETAIN FOR FUTURE REFERENCE. SHOULD THE UNIT REQUIRE MAINTENANCE, CONTACT AN AUTHORIZED SERVICE LOCATION-SEE SERVICE PROCEDURE.

USE OF CONTROLS, ADJUSTMENTS OR THE PERFORMANCE OF PROCEDURES OTHER THAN THOSE SPECIFIED HEREIN MAY RESULT IN HAZARDOUS LASER RADIATION EXPOSURE.

TO PREVENT DIRECT EXPOSURE TO LASER BEAM, DO NOT TRY TO OPEN THE ENCLOSURE. VISIBLE LASER RADIATION MAY BE PRESENT WHEN THE ENCLOSURE IS OPENED. DO NOT STARE INTO BEAM.

### PREPARATION OF SERVICING

The laser diode used for a pickup head may be destroyed with external static electricity.

Moreover, even if it is operating normally after repair, when static electricity discharge is received at the time of repair, the life of the product may be shortened.

Please perform the following measure against static electricity, be careful of destruction of a laser diode at the time of repair.

- Place the unit on a workstation equipped to protect against static electricity, such as conductive mat.
- Soldering iron with ground wire or ceramic type is used.
- A worker needs to use a ground conductive wrist strap for body.

# IMPORTANT SAFEGUARDS

---

- 1) Read these instructions.
- 2) Keep these instructions.
- 3) Heed all warnings.
- 4) Follow all instructions.
- 5) Do not use this apparatus near water.
- 6) Clean only with dry cloth.
- 7) Do not block any ventilation openings. Install in accordance with the manufacturer's instructions.
- 8) Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.
- 9) Do not defeat the safety purpose of the polarized or grounding-type plug. A polarized plug has two blades with one wider than the other. A grounding type plug has two blades and a third grounding prong. The wide blade or the third prong are provided for your safety. If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.
- 10) Protect the power cord from being walked on or pinched particularly at plugs, convenience receptacles, and the point where they exit from the apparatus.
- 11) Only use attachments/accessories specified by the manufacturer.
- 12) Use only with the cart, stand, tripod, bracket, or table specified by the manufacturer, or sold with the apparatus. When a cart is used, use caution when moving the cart/apparatus combination to avoid injury from tip-over.
- 13) Unplug this apparatus during lightning storms or when unused for long periods of time.
- 14) Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as power-supply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.
- 15) Apparatus shall not be exposed to dripping or splashing and that no objects filled with liquids, such as vases, shall be placed on the apparatus.
- 16) An outside antenna system should not be located in the vicinity of overhead power lines or other electric light or power circuits, or where it can fall into such power lines or circuits. When installing an outside antenna system, extreme care should be taken to keep from touching such power lines or circuits, as contact with them might be fatal.
- 17) Do not overload wall outlets and extension cords, as this can result in a risk of fire or electric shock.
- 18) Do not push objects through any openings in this unit, as they may touch dangerous voltage points or short out parts that could result in fire or electric shock. Never spill or spray any type of liquid into the unit.

PORTABLE CART WARNING  
(symbol provided by RETAC)

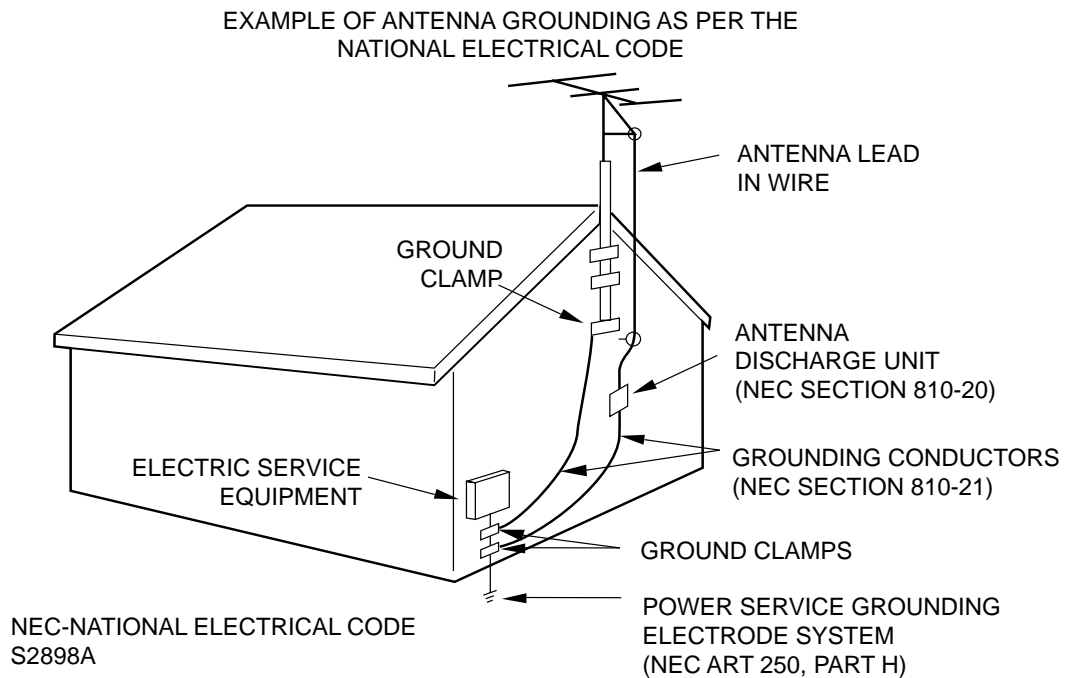


**S3126A**

# IMPORTANT SAFEGUARDS

(CONTINUED)

- 19) If an outside antenna or cable system is connected to the unit, be sure the antenna or cable system is grounded to provide some protection against voltage surges and built-up static charges, Section 810 of the National Electrical Code, ANSI/NFPA 70, provides information with respect to proper grounding of the mast and supporting structure, grounding of the lead-in wire to an antenna discharge unit, size of grounding conductors, location of antenna discharge unit, connection to grounding electrodes, and requirements for the grounding electrode.



- 20) When replacement parts are required, be sure the service technician uses replacement parts specified by the manufacturer or those that have the same characteristics as the original part. Unauthorized substitutions may result in fire, electric shock or other hazards.
- 21) Upon completion of any service or repairs to this unit, ask the service technician to perform safety checks to determine that the unit is in proper operating condition.
- 22) Keep your fingers clear of the disc slot as it is closing. It may cause injury.
- 23) When you connect the product to other equipment, turn off the power and unplug all of the equipment from the wall outlet. Failure to do so may cause an electric shock and serious personal injury. Read the owner's manual of the other equipment carefully and follow the instructions when making any connections.
- 24) Reduce the volume to the minimum level before you turn on the product. Otherwise, sudden high volume sound may cause hearing or speaker damage.

# IMPORTANT SAFEGUARDS

(CONTINUED)

- 25) Do not allow the product to output distorted sound for an extended period of time. It may cause speaker overheating and fire.
- 26) When you use the headphones, keep the volume at a moderate level. If you use the headphones continuously with high volume sound, it may cause hearing damage.
- 27) Do not look into the opening of the disc slot or ventilation opening of the product to see the source of the laser beam. It may cause eye damage.
- 28) Do not use a cracked, deformed, or repaired disc. These discs are easily broken and may cause serious personal injury and product malfunction.
- 29) This reminder is provided to call the cable TV system installer's attention to Article 820-40 of the NEC that provides guidelines for proper grounding and, in particular, specifies that the cable ground shall be connected to the grounding system of the building, as close to the point of cable entry as practical.

## CONDENSATION

Moisture will form in the operating section of the player if the player is brought from cool surroundings into a warm room or if the temperature of the room rises suddenly. When this happens, player's performance will be impaired.

To prevent this, let the player stand in its new surroundings for about an hour before switching it on, or make sure that the room temperature rises gradually.

Condensation may also form during the summer if the player is exposed to the breeze from an air conditioner. In such cases, change the location of the player.

## HOW TO HANDLE THE LCD PANEL

- Do not press hard or jolt the LCD panel. It may cause the LCD panel glass to break and injury may occur.
- If the LCD panel is broken, make absolutely sure that you do not touch the liquid in the panel. This may cause skin inflammation.

If the liquid gets in your mouth, immediately gargle and consult with your doctor. Also, if the liquid gets in your eyes or touches your skin, consult with your doctor after rinsing for at least 15 minutes or longer in clean water.

## WHEN REPLACING DVD DECK

### [ When removing the DVD Deck ]

Before removing Pick Up PCB and DVD MT PCB connector, the short circuit the position shown in **Fig. 1** using a soldering iron. If you remove the DVD Deck with no soldering, the Laser may be damaged.

### [ When installing the DVD Deck ]

Remove all the soldering on the short circuit position after the connection of Pick Up PCB and DVD MT PCB connector.

### NOTE

- Before your operation, please read "PREPARATION OF SERVICING".
- Use the Lead Free solder.
- Manual soldering conditions
  - Soldering temperature:  $320 \pm 20^{\circ}\text{C}$
  - Soldering time: Within 3 seconds
  - Soldering combination: Sn-3.0Ag-0.5Cu
- When Soldering/Removing of solder, use the draw in equipment over the Pick Up Unit to keep the Flux smoke away from it.

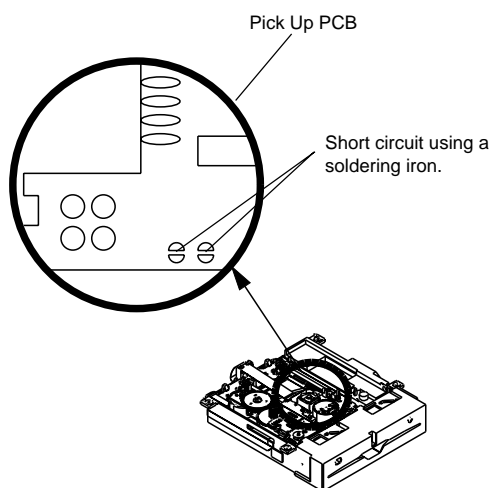


Fig. 1

## DISC REMOVAL METHOD AT NO POWER SUPPLY

1. Remove the Back Cabinet and Angle Deck. (Refer to item 1 of the DISASSEMBLY INSTRUCTIONS.)
2. Slide the Belt Loading toward the arrow direction by hand to release the lock. (Refer to Fig. 1)
3. Take out the Disc from the DVD Deck. Be careful not to scratch on the Disc.

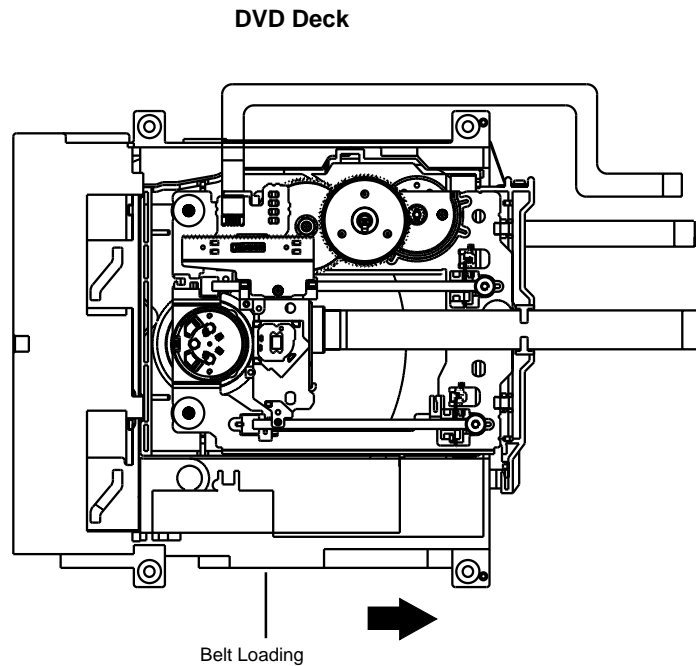


Fig. 1

## PARENTAL CONTROL - RATING LEVEL 4 DIGIT PASSWORD CANCELLATION

If the stored 4 digit password in the Rating Level menu needs to be cancelled, please follow the steps below.

1. Turn Unit ON.
2. Set the DVD to the Stop Mode.
3. Check that 'No disc' is displayed on the screen.
4. Press and hold the 'STOP' button on the front panel.
5. Simultaneously press and hold the '7' key on the remote control unit.
6. Hold both keys for more than 2 seconds.
7. The On Screen Display message 'PASSWORD CLEAR' will appear.
8. The 4 digit password has now been cleared.

## ABOUT LEAD FREE SOLDER (PbF)

### Distinction of PbF PCB:

PCBs (manufactured) using lead free solder will have a PbF printing on the PCB.

(Please refer to figures.)



### Caution:

- Pb free solder has a higher melting point than standard solder;  
Typically the melting point is 86°F~104°F(30°C~40°C) higher.  
Please use a soldering iron with temperature control and adjust it to 650°F ± 20°F (350°C ± 10°C).  
In case of using high temperature soldering iron, please be careful not to heat too long.
- Pb free solder will tend to splash when heated too high (about 1100°F/ 600°C).
- All products with the printed circuit board with PbF printing must be serviced with lead free solder.  
When soldering or unsoldering, completely remove all of the solder from the pins or solder area,  
and be sure to heat the soldering points with the lead free solder until it melts sufficiently.

### Recommendations

Recommended lead free solder composition is Sn-3.0Ag-0.5Cu.



# GENERAL SPECIFICATIONS

G-1	TV System	LCD	LCD Size / Visual Size	25.5 inch / 647.7mmV
			LCD Type	Color TFT LCD
			Number of Pixels	1366(H) x 768(V)
			View Range	88/88 degree
			Left/Right Up/Down	88/88 degree
G-2	DVD System	Color System		NTSC
		Disc		DVD, CD-DA, CD-R/RW
		Disc Diameter		DVD-R/RW (Video Format Only)
		Drive		120 mm , 80 mm
		Search speed	Fwd	DSM-2
G-3	Tuning System			4 step
			Actual	2-45 times (DVD)
			Rev	4-40 times (CD)
			Actual	4 step
			Actual	2-45 times (DVD)
G-4	Signal	Slow speed	Fwd	4-40 times (CD)
			Actual	1/7 -1/2 times
			Rev	--
			Actual	1/7 -1/2 times
			Actual	--
G-5	Power	Broadcasting System	Analog	US System M
			Digital	ATSC(8VSB)/QAM
		Tuner and Receive CH	System	1Tuner
			Destination	US (W/CABLE)
			CH Coverage	2~69, 4A, A-5~A-1, A~I, J~W, W+1~W+84
G-1	TV System	Intermediate Digital		44.00MHz
		Frequency Analog	Picture(FP)	45.75MHz
			Sound(FS)	41.25MHz
			FP-FS	4.50MHz
		Preset CH		No
G-2	DVD System	Stereo/Dual TV Sound		US-Stereo
		Tuner Sound Muting		Yes
G-3	Tuning System	Video Signal	Input Level	1 V p-p/75 ohm
			Output Level	--
			S/N Ratio (Weighted)	--
			Horizontal Resolution at DVD Mode	--
			--	--
G-4	Signal	RGB Signal	Output Level	--
		Audio Signal	Input Level	0.85 V p-p/50k ohm
			Output Level	--
			at DVD	--
			at TV	--
G-5	Power		Digital Output Level	--
			0.5 V p-p/75 ohm	0.5 V p-p/75 ohm
			S/N Ratio at DVD (Weighted)	90dB
			Harmonic Distortion	0.02% (1KHz)
			Frequency Response :	4Hz - 22kHz
G-1	TV System		at DVD	--
			at Video CD	--
			at SVCD	--
			at CD	4Hz - 20kHz
G-2	DVD System	Power Source	AC	120V, 60Hz
			DC	--
		Power Consumption	at AC	145W at 120V 60Hz
			at DC	--
			Stand by (at AC)	1W at 120V 60Hz
G-3	Tuning System		Energy Star	Yes
			Per Year	-- kWh/Year
		Protector	Power Fuse	Yes
			Safety Circuit	Yes
			IC Protector(Micro Fuse)	Yes

## GENERAL SPECIFICATIONS

[illegible]

## GENERAL SPECIFICATIONS

G-11	Features (TV)	Auto Shut Off	Yes
		Auto Search	No
		Power On Memory	No
		Comb Filter	Yes 3 -D
		Game Position	No
		Auto Setup(Language/CH Program)	No
		Picture Setting(TV)	Yes
		AV Mode(Picture Preference)	Yes
		Brightness , Contrast , Color	Yes
		Tint	Yes
		Sharpness	Yes
		Color Temperature	Yes
		Cable Clear	No
		Backlight	Yes
		Picture Setting(PC)	Yes
		Brightness , Contrast	Yes
		HOR Position , VER Position	Yes
		Phase, Clock	Yes
		Red, Green, Blue	Yes
		Auto Adjust	No
		Backlight	Yes
		Audio	MTS
		Tone Control (Bass/Treble/Balance)	Yes
		Stable Sound	No
		Surround	Yes
		BBE	No
		SRS WOW (SRS 3D/Focus/Tru Bass)	No
		Variable Audio Out	No
		Tuning	CH Program
		Air/Cable	Yes
		ADD/DELETE	Yes
		Label	CH Label
		Video Label	Yes
		Favorite CH	No
		V-Chip	Yes
		Type	USA/CANADA Type
		RRT Setup	Yes
		Lock	Hotel Lock
		Channel Lock	No
		Video Lock	No
		Panel Lock	No
		OSD Language	English    French    Spanish
		Closed Caption	Yes
		CC Advanced	Yes
		View Mode (Picture Size)	Yes
		Picture Scroll	Yes
		Cinema Mode	Yes
		Aspect	Yes
		PFC(Power Factor circuit)	No
		Freeze frame	No
		PIP/POP	No
		Direct Input Selection	Yes
		Digital Out	Dolby Digital
		MPEG	No
		PCM	Yes
		DTS	No
		PC Monitor Input	Yes
		VGA (640x480)	Yes (60Hz)
		VGA (720x400)	Yes (70Hz)
		WVGA (848x480)	Yes (60Hz)
		SVGA (800x600)	Yes (60Hz)
		XGA (1024x768)	Yes (60Hz)
		WXGA (1280x768)	Yes (60Hz)
		WXGA (1280x720)	Yes (60Hz)
		WXGA (1360x768)	Yes (60Hz)
		SXGA (1280x1024)	No

## GENERAL SPECIFICATIONS

	HDMI Input		Yes
		VGA (640x480)	Yes (60Hz)
		720x480i (4:3)	Yes (60Hz)
		720x480i (16:9)	Yes (60Hz)
		720x480p (4:3)	Yes (60Hz)
		720x480p (16:9)	Yes (60Hz)
		720x576i (4:3)	No
		720x576i (16:9)	No
		720x576p (4:3)	No
		720x576p (16:9)	No
		1280x720p	Yes (60Hz)
		1920x1080i	Yes (60Hz)
	Component Input		Yes
		720x480i (4:3)	Yes (60Hz)
		720x480i (16:9)	Yes (60Hz)
		720x480p (4:3)	Yes (60Hz)
		720x480p (16:9)	Yes (60Hz)
		720x576i (4:3)	No
		720x576i (16:9)	No
		720x576p (4:3)	No
		720x576p (16:9)	No
		1280x720p	Yes (60Hz)
		1920x1080i	Yes (60Hz)
<b>Features (DVD)</b>	Video CD Playback		No
	SVCD Playback		No
	MP3 Playback		Yes
	JPEG		Yes
	WMA		Yes
	Digital Out	(Dolby Digital)	Yes
		(MPEG)	Yes
		(PCM)	Yes
		(DTS)	Yes
	Down Mix Out	(Dolby Digital)	Yes
		(DTS)	No
	Closed Caption		Yes
	Screen Saver		No
	TV Screen	4:3 (Letter Box, Pan Scan)	Yes
		16:9 (Wide)	Yes
	Audio DAC		192kHz / 24bit

## GENERAL SPECIFICATIONS

<b>G-12</b>	<b>Accessories</b>	Owner's Manual	Language	English/French/Spanish
			w/Guarantee Card	Yes
		Remote Control Unit		Yes
		Rod Antenna		No
			Poles	--
			Terminal	--
		Loop Antenna		No
			Terminal	--
		U/V Mixer		No
		DC Car Cord (Center+)		No
		Guarantee Card		No
		Warning Sheet		No
		Circuit Diagram		No
		Antenna Change Plug		No
		Service Facility List		No
		Important Safeguard		No
		Dew/AHC Caution Sheet		No
		Quick Set-up Sheet		No
		Battery		Yes
			UM size x pcs	UM-3 x 2 pcs
			OEM Brand	No
		AC Adapter		No
		AC Cord (for AC Adapter)		No
		AC Cord (Flat Polarity Plugs)		Yes
		Cable Cramp		Yes
		Stand		Yes
		Stand Screw		Yes
		Hexagon Wrench		Yes
		AV Cord (2Pin-1Pin)		No
		Registration Card (NDL Card)		Yes
		300 to 75ohm Antenna Adapter		No
		Sheet Information (Return)		No
		Sheet Information (HDMI)		No

# GENERAL SPECIFICATIONS

G-13	Interface	Switch	Top	Power (Tact)	Yes			
				Channel Up/Menu Up	Yes			
				Channel Down/Menu Down	Yes			
				Volume Up/Menu >	Yes			
				Volume Down/Menu <	Yes			
				Menu	No			
				Play	Yes			
				Eject	Yes			
				Skip+, Search+	Yes			
				Skip-, Search-	Yes			
				Still/Pause	No			
				Stop	Yes			
				Main Power SW	No			
				Input Select	Yes			
				Indicator	Rear	Main Power SW	No	
		Power/Stand-By On Timer	Yes (Green / Red) No					
		Terminals	Side	Video Input 1	RCA x 1			
				Audio Input 1	RCA x 2(L/MONO, R)			
				S - Input 1	Yes			
				Video Input 2	RCA x 1			
				Audio Input 2	RCA x 2(L/MONO, R)			
				S - Input 2	No			
				Video Output	No			
				Audio Output	No			
				Component Input 1 Analog Audio	RCA x 3 Video Input 2 Audio Input Alternative			
				Component Input 2 Analog Audio	No No			
				HDMI Input Analog Audio	HDMI x 1 Mini Jack			
				Sub Woofer Out	No			
				PC Monitor Input Analog Audio	Yes HDMI 1 Audio Input Alternative			
				Digital Audio Output	Coaxial			
				DC Jack (Center +)	No			
				VHF/UHF Antenna Input	F Type			
				Video Input 3	No			
				Audio Input 3	No			
				S - Input 3	No			
				Other Terminal	No			
				Rear	AC Inlet	Yes		
				G-14	Set Size	Approx. W x D x H (mm)		663 x 243 x 496.5
						w/o Handle, Stand Approx. W x D x H (mm)		663 x 110 x 454.5
		G-15	Weight	Net (Approx.)		13.6kg (30.0lbs)		
Net w/o Handle, Stand (Approx.)				11.9kg (26.2lbs)				
Gross (Approx.)				16.3kg (35.9lbs)				
G-16	Carton	Master Carton	No					
			Content					
			--- Sets					
			Material					
			--- / ---					
		Gift Box	Dimensions W x D x H(mm)					
			Description of Origin					
			---					
			Material					
			Double/Brown					
		Drop Test	W/Color Photo Label					
			No					
			W/Handle					
			No					
		w/Pallet	Dimensions W x D x H(mm)					
			762 x 277 x 567					
			Description of Origin					
Yes								
1 Corner / 3 Edges / 5 Surfaces								
G-17	Material	Cabinet	Front	PC+ABS 94V0 NON-HALOGEN				
			Rear	PS 94V0 NON-DECABROM				
			Jack Panel	--				
PCB	Non-Halogen Demand	No						
	Evelet Demand	Yes						

# GENERAL SPECIFICATIONS

G-18	Environment	Environmental standard requirement	Green procurement of SHARP
		Pb-free	Phase3(Phase3A)
		Measures for Whisker	Yes
		Rohs	Yes

# DISASSEMBLY INSTRUCTIONS

## 1. REMOVAL OF MECHANICAL PARTS AND P.C. BOARDS

### 1-1: BACK CABINET (Refer to Fig. 1-1)

1. Remove the 14 screws ①.
2. Remove the 7 screws ②.
3. Remove the Back Cabinet in the direction of arrow.

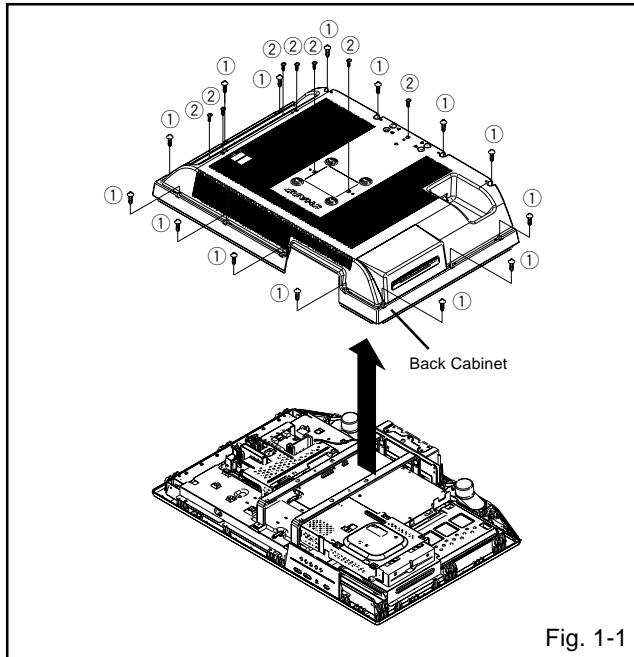


Fig. 1-1

### 1-2: DVD MT PCB/DVD DECK (Refer to Fig. 1-2)

1. Short circuit the position shown in **Fig. 1-2** using a soldering iron. If you remove the DVD Deck with no soldering, the Laser may be damaged.
2. Disconnect the following connectors: (CP701 and CP410).
3. Remove the 5 screws ①.
4. Remove the Angle DVD Ass'y in the direction of arrow (A).
5. Remove the 4 screws ②.
6. Disconnect the following connectors: (CP2301, CP2302 and CP2303).
7. Remove the DVD MT PCB in the direction of arrow (B).
8. Remove the 4 screws ③.
9. Remove the DVD Deck in the direction of arrow (C).
10. Remove the 2 screws ④.
11. Remove the Angle DVD-1 in the direction of arrow (D).

#### NOTE

1. Before your operation, please read "PREPARATION OF SERVICING".
2. Use the Lead Free solder.
3. Manual soldering conditions
  - Soldering temperature:  $320 \pm 20^{\circ}\text{C}$
  - Soldering time: Within 3 seconds
  - Soldering combination: Sn-3.0Ag-0.5Cu
4. When Soldering/Removing of solder, use the drawing equipment over the Pick Up Unit to keep the Flux smoke away from it.
5. When installing the DVD Deck, remove all the soldering on the short circuit position after the connection of Pick Up PCB and DVD MT PCB connector.

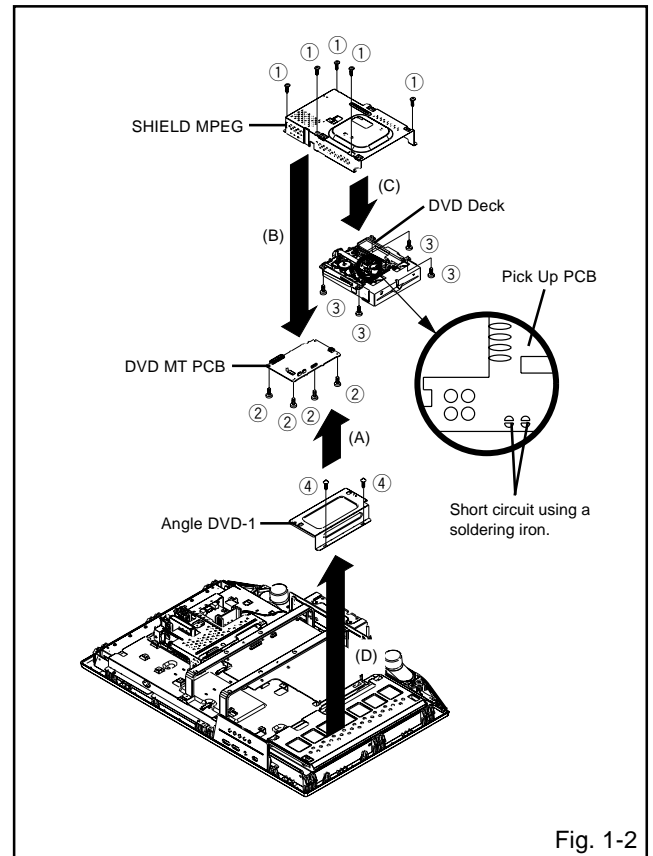


Fig. 1-2

### 1-3: OPERATION PCB (Refer to Fig. 1-3)

1. Disconnect the following connector: (CP103).
2. Remove the Plate Button Ass'y in the direction of arrow (A).
3. Remove the 6 screws ①.
4. Remove the Operation PCB and Operation 2 PCB in the direction of arrow (B).
5. Remove the 7 screws ②.
6. Remove the 2 screws ③.
7. Remove the Angle Hinge in the direction of arrow (C).

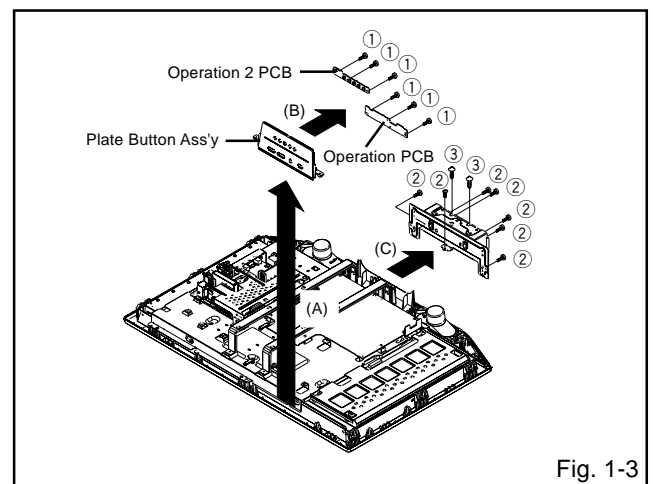


Fig. 1-3



## DISASSEMBLY INSTRUCTIONS

### 1-4: REMOCON PCB (Refer to Fig. 1-4)

1. Disconnect the following connector:  
(CP106).
2. Remove the 2 screws ①.
3. Remove the Remocon PCB in the direction of arrow.

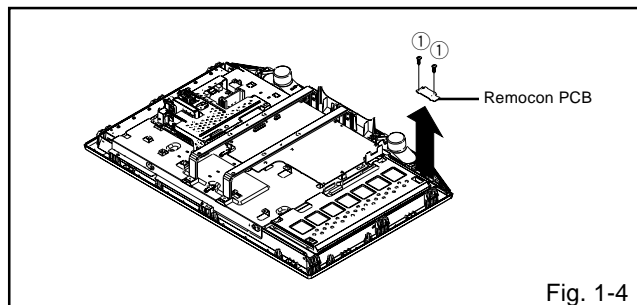


Fig. 1-4

### 1-5: LCD BLOCK (Refer to Fig. 1-5)

1. Disconnect the following connectors:  
(CP406, CP1001 and CP2407).
2. Remove the Holder Panel.
3. Remove the 4 screws ①.
4. Remove the LCD Block in the direction of arrow (A).
5. Remove the 4 screws ②.
6. Remove the Angle Main.

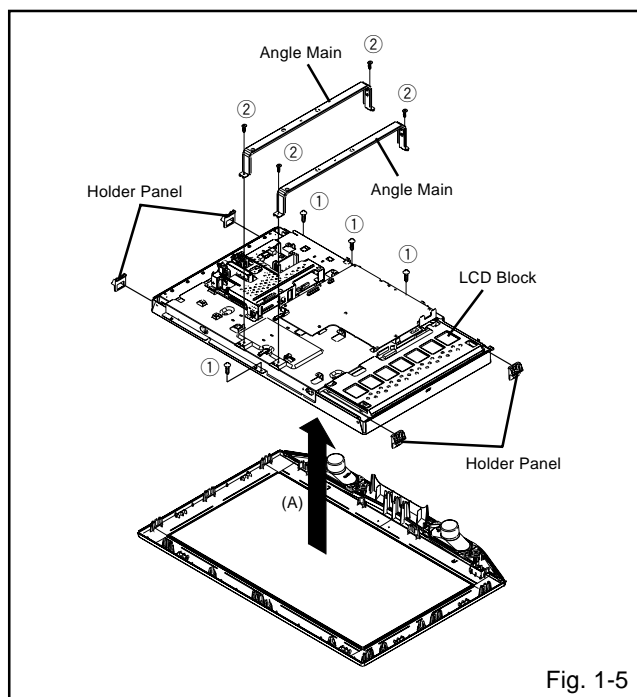


Fig. 1-5

### 1-6: DIGITAL PCB (Refer to Fig. 1-6)

1. Disconnect the following connector:  
(CP3401).
2. Remove the 2 screws ①.
3. Remove the 4 screws ②.
4. Remove the screw ③.
5. Remove the Plate Jack in the direction of arrow (A).
6. Remove the 9 screws ④.
7. Remove the Digital PCB and Shield Digital in the direction of arrow (B).

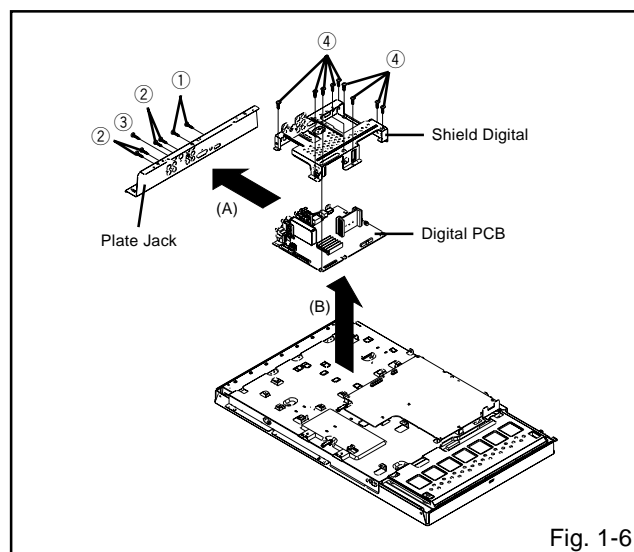


Fig. 1-6

### 1-7: POWER PCB (Refer to Fig. 1-7)

1. Remove the 8 screws ①.
2. Remove the Power PCB in the direction of arrow.

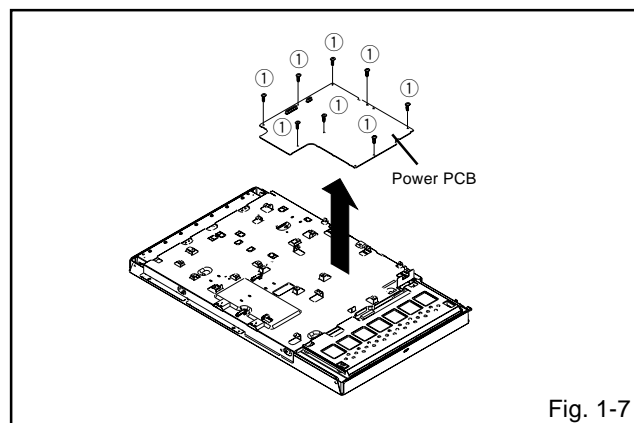


Fig. 1-7

### 1-8: COVER LCD (Refer to Fig. 1-8)

1. Remove the 4 screws ①.
2. Remove the Cover LCD in the direction of arrow.

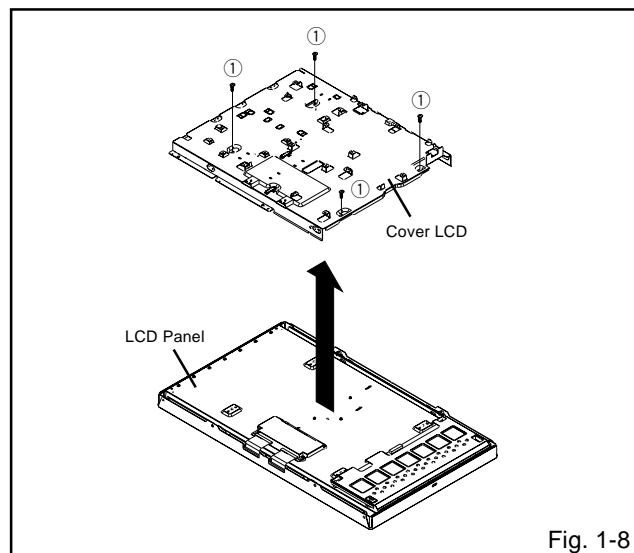


Fig. 1-8

# DISASSEMBLY INSTRUCTIONS

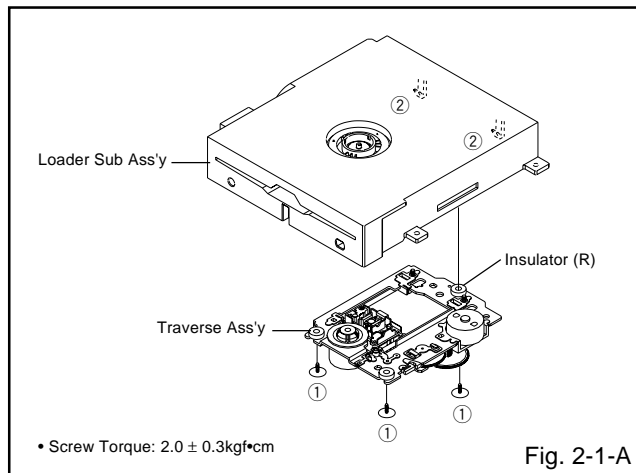
## 2. REMOVAL OF DVD DECK PARTS

### NOTE

1. Disassemble only the DVD DECK PARTS parts listed here. Minute adjustments are needed if the disassembly is done. If the repair is needed except listed parts, replace the DVD MECHA ASS'Y.

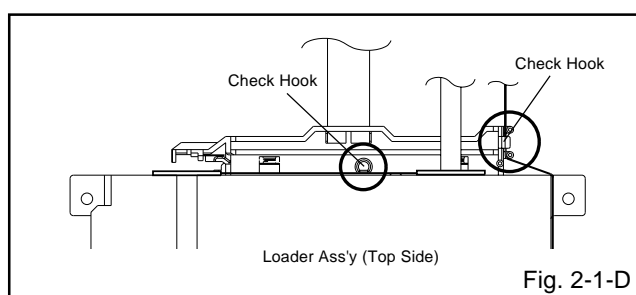
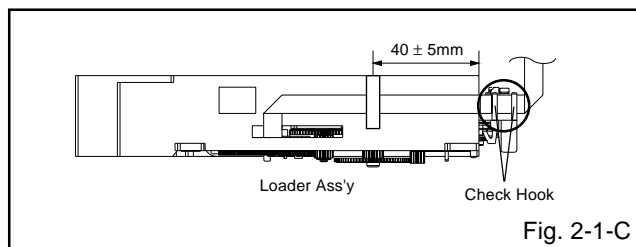
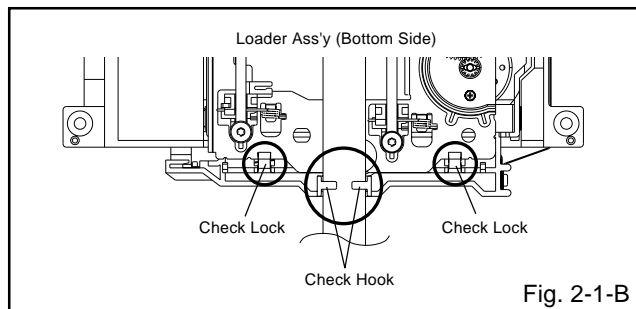
### 2-1: TRAVERSE ASS'Y (Refer to Fig. 2-1-A)

1. Remove the 3 screws ①.
2. Unlock the 2 supports ②.
3. Remove the Insulator (R) from the Loader Sub Ass'y.
4. Remove the Traverse Ass'y.



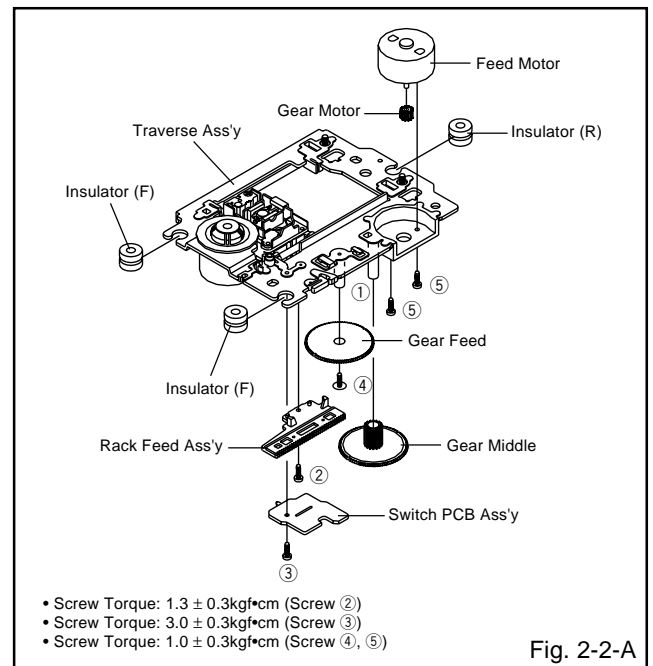
### NOTE

1. In case of the Traverse Ass'y installation, hook the wire on the Loader Ass'y as shown Fig. 2-2-B to Fig. 2-2-D.



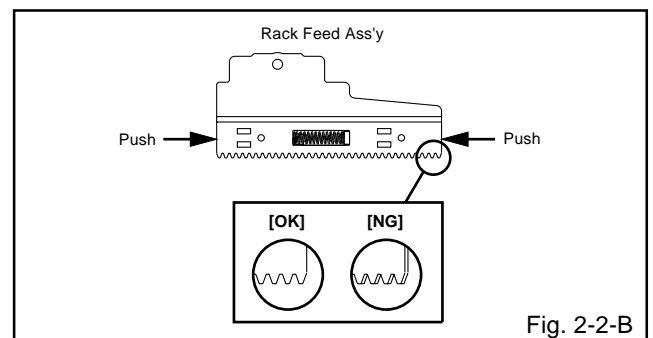
### 2-2: SWITCH PCB ASS'Y/GEAR MIDDLE/GEAR FEED/RACK FEED ASS'Y/FEED MOTOR (Refer to Fig. 2-2-A)

1. Remove the Insulator (F).
2. Remove the Insulator (R).
3. Unlock the support ①.
4. Remove the Gear Middle.
5. Remove the screw ②.
6. Remove the Rack Feed Ass'y.
7. Remove the screw ③.
8. Remove the Switch PCB Ass'y.
9. Remove the screw ④.
10. Remove the Gear Feed.
11. Remove the 2 screws ⑤.
12. Remove the Feed Motor.
13. Remove the Gear Motor.

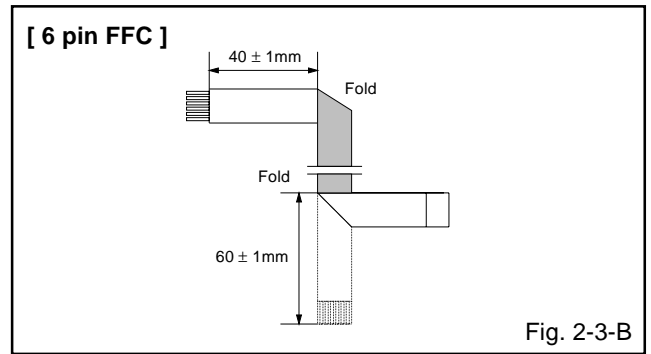
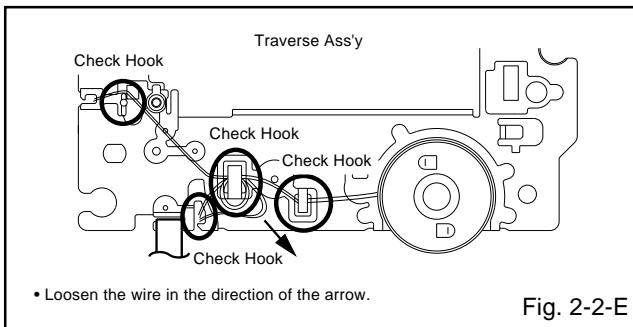
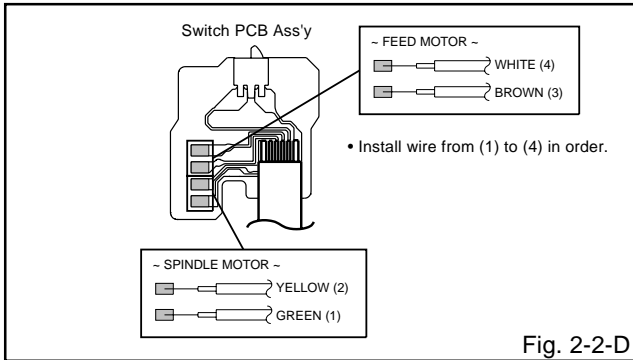
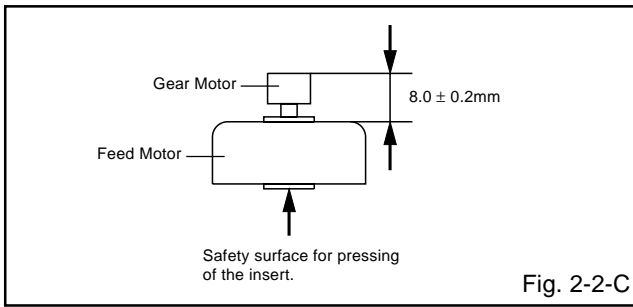


### NOTE

1. When installing the Rack Feed Ass'y, push both ends to align the teeth as shown Fig. 2-2-B. Then install it.
2. In case of the Gear Motor installation, check if the value of the Fig. 2-2-C is correct.
3. When installing the wire of the Switch PCB Ass'y, install it correctly as Fig. 2-2-D.  
 Manual soldering conditions
  - Soldering temperature:  $320 \pm 20^\circ\text{C}$
  - Soldering time: Within 3 seconds
  - Soldering combination: Sn-3.0Ag-0.5Cu
4. After the assembly of the Traverse Ass'y, hook the wire on the Traverse Ass'y as shown Fig. 2-2-E.



## DISASSEMBLY INSTRUCTIONS

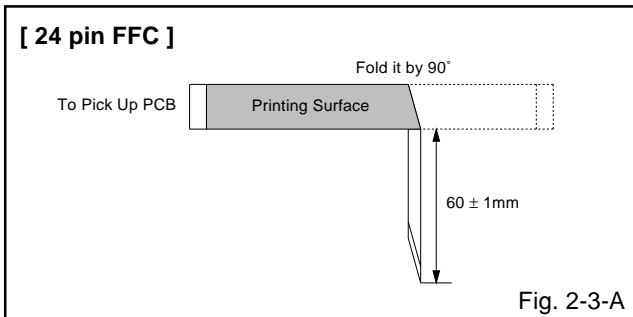


### 2-3: FFC WIRE HANDLING

1. When installing the FFC, fold it correctly and install it as shown from Fig. 2-3-A to Fig. 2-3-B.

#### NOTE

1. Do not make the folding lines except the specified positions for the FFC.



## DISASSEMBLY INSTRUCTIONS

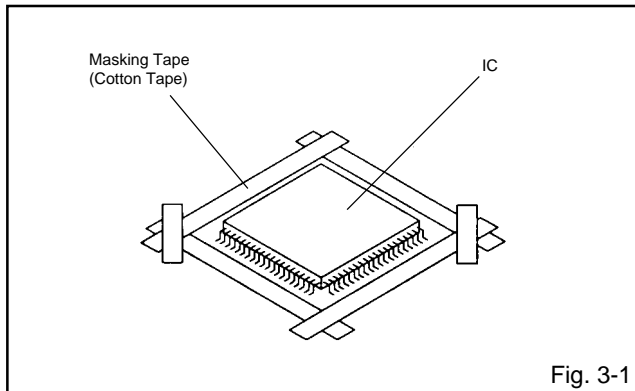
### 3.REMOVAL AND INSTALLATION OF FLAT PACKAGE IC

#### REMOVAL

1. Put Masking Tape (cotton tape) around the Flat Package IC to protect other parts from any damage. **(Refer to Fig. 3-1.)**

#### NOTE

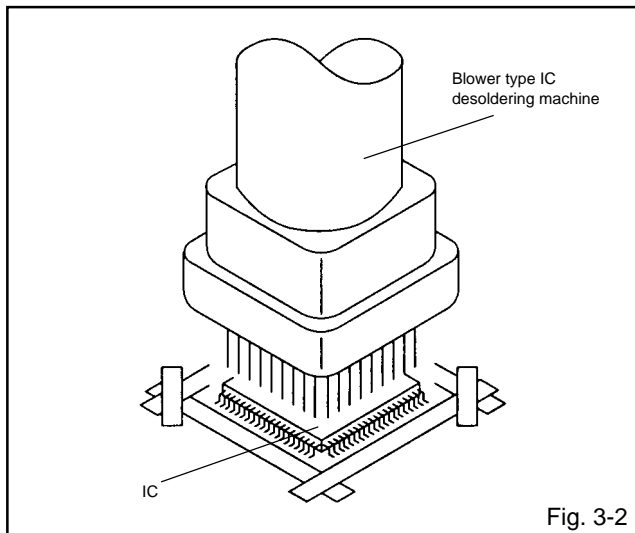
Masking is carried out on all the parts located within 10 mm distance from IC leads.



2. Heat the IC leads using a blower type IC desoldering machine. **(Refer to Fig. 3-2.)**

#### NOTE

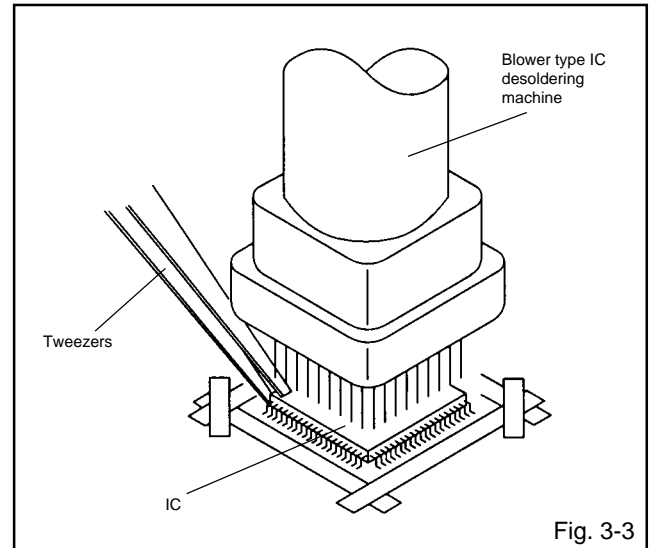
Do not rotate or move the IC back and forth , until IC can move back and forth easily after desoldering the leads completely.



3. When IC starts moving back and forth easily after desoldering completely, pickup the corner of the IC using tweezers and remove the IC by moving with the IC desoldering machine. **(Refer to Fig. 3-3.)**

#### NOTE

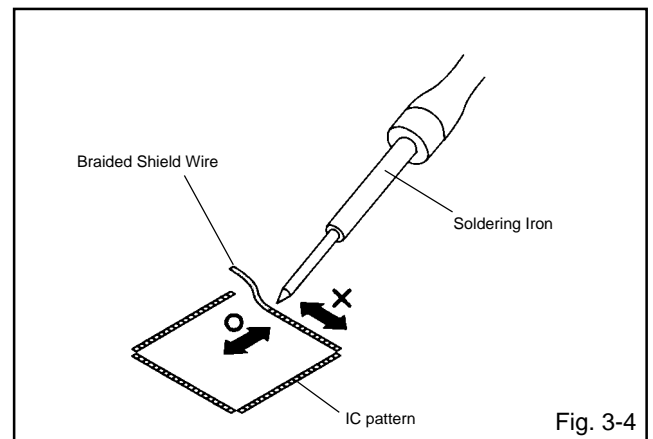
Some ICs on the PCB are affixed with glue, so be careful not to break or damage the foil of each IC leads or solder lands under the IC when removing it.



4. Peel off the Masking Tape.
5. Absorb the solder left on the pattern using the Braided Shield Wire. **(Refer to Fig. 3-4.)**

#### NOTE

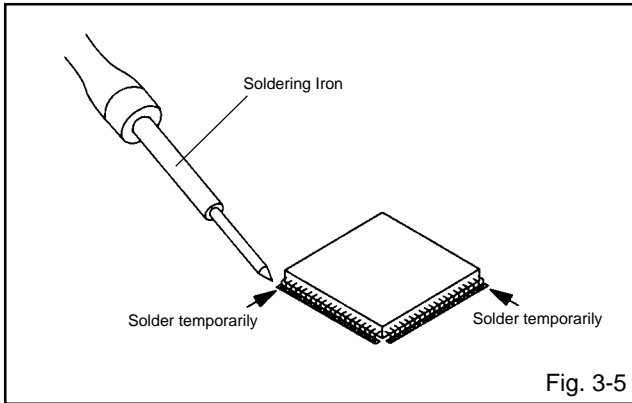
Do not move the Braided Shield Wire in the vertical direction towards the IC pattern.



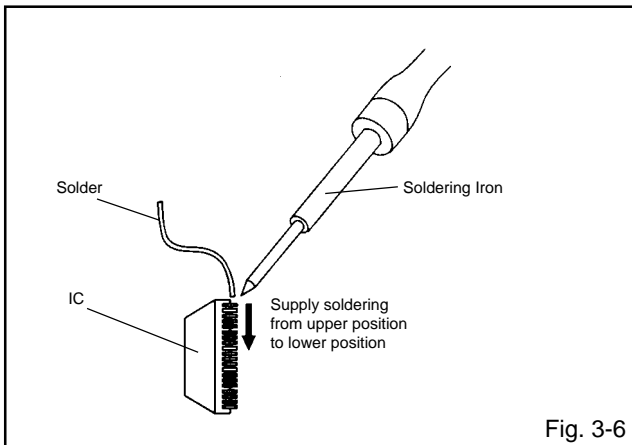
# DISASSEMBLY INSTRUCTIONS

## INSTALLATION

1. Take care of the polarity of new IC and then install the new IC fitting on the printed circuit pattern. Then solder each lead on the diagonal positions of IC temporarily. (Refer to Fig. 3-5.)



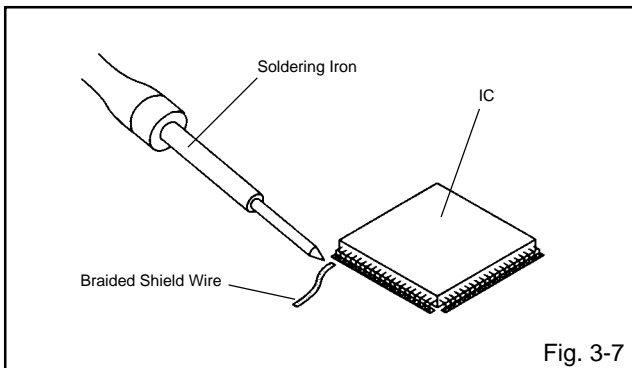
2. Supply the solder from the upper position of IC leads sliding to the lower position of the IC leads. (Refer to Fig. 3-6.)



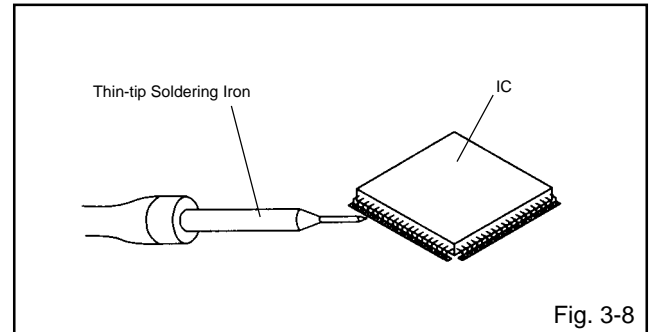
3. Absorb the solder left on the lead using the Braided Shield Wire. (Refer to Fig. 3-7.)

### NOTE

Do not absorb the solder to excess.



4. When bridge-soldering between terminals and/or the soldering amount are not enough, resolder using a Thin-tip Soldering Iron. (Refer to Fig. 3-8.)



5. Finally, confirm the soldering status on four sides of the IC using a magnifying glass. Confirm that no abnormality is found on the soldering position and installation position of the parts around the IC. If some abnormality is found, correct by resoldering.

### NOTE

When the IC leads are bent during soldering and/or repairing, do not repair the bending of leads. If the bending of leads are repaired, the pattern may be damaged. So, always be sure to replace the IC in this case.

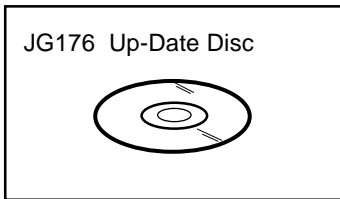
## SERVICE MODE LIST

This unit provided with the following SERVICE MODES so you can repair, examine and adjust easily.

To enter to the SERVICE MODE function, press and hold both buttons simultaneously on the main unit and on the remote control for more than a the standard time in the appropriate condition. (See below chart.)

Set Condition	Set Key	Remocon Key	Standard Time	Operations
TV mode	VOL. DOWN (Minimum)	0	2 sec.	Releasing of V-CHIP PASSWORD.
TV mode	VOL. DOWN (Minimum)	1	2 sec.	Initialization of factory TV data. NOTE: If you set factory initialization, the memories are reset such as the channel setting, and the POWER ON total hours.
DVD mode (No disc)	VOL. DOWN (Minimum)	4	2 sec.	Initialization of factory DVD data.
DVD mode (No disc)	VOL. DOWN (Minimum)	5	2 sec.	DVD Write mode. Refer to the "RE-WRITE FOR DVD FIRMWARE". NOTE: Do not use this for normal servicing.
TV mode	VOL. DOWN (Minimum)	6	2 sec.	POWER ON total hours are displayed on the screen. Can be checked of the INITIAL DATA of MEMORY IC. Refer to the "WHEN REPLACING EEPROM (MEMORY) IC".
TV mode	VOL. DOWN (Minimum)	8	2 sec.	Check of the SUM DATA and MICON VERSION on the screen. Refer to the "WHEN REPLACING EEPROM (MEMORY) IC".
ALL mode	VOL. DOWN (Minimum)	9	2 sec.	Display of the Adjustment MENU on the screen. Refer to the "ELECTRICAL ADJUSTMENT" (On-Screen Display Adjustment).
DVD mode (No disc)	STOP	1	2 sec.	Check of the firmware version. Refer to the "RE-WRITE FOR DVD FIRMWARE". NOTE: Do not use this for normal servicing.
DVD mode (No disc)	STOP	7	2 sec.	Releasing of PARENTAL LOCK. Refer to the "PARENTAL CONTROL - RATING LEVEL".

## SERVICING FIXTURES AND TOOLS



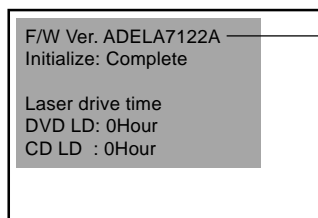
Ref. No.	Part No.	Parts Name	Remarks
JG176	APJG176123	Up-Date Disc	Up-Date of the Firmware

## RE-WRITE FOR DVD FIRMWARE

1. Turn on the power, and set the DVD mode.
2. Confirm that the "No Disc" will be appeared on the screen.
3. Press both VOL. DOWN button on the set and Channel button **(5)** on the remote control for more than 2 seconds.
4. Press VOL. UP/DOWN button on the unit to check if all the keys on the unit do not function.  
**NOTE: To check if DVD Write mode is set.**  
**When inserting Up-Date Disc at Non DVD Write mode, the read error will happen.**
5. Insert the Up-Date Disc. **(Refer to SERVICING FIXTURE AND TOOLS)**
6. Automatic read will start and "Firmware upgrade Programing, Please Wait... Do not switch the player off!" will be displayed on the screen.  
 At this time, the horizontal noise lines may appear. But no problem.  
**NOTE: Do not turn off the unit on the way or operate the keys on the unit and remocon.**  
**Up-Date error will happen and can not be done with the Up-Date of Up-Date Disc.**
7. After the Up-Date, Logo screen will appear.
8. Unplug the AC cord, then plug it in.  
 After the write, set to the initializing of shipping.
9. Turn on the power, and set the DVD mode.
10. Press both VOL. DOWN button on the set and Channel button **(4)** on the remote control for more than 2 seconds.  
 The "INITIALIZE 5 ---> COMPLETE" will appear on the screen.
11. Then unplug the AC cord, and plug it in.

### CHECK FOR THE FIRMWARE VERSION

12. Turn on the power, and set the DVD mode.
13. Press both Channel button **(1)** on the remote control and the STOP button on the set for more than 2 seconds.  
 Firmware version will be displayed on the top left of the screen.



A D E L A 7 1 2 2 A

Fixed

Released times on the same date

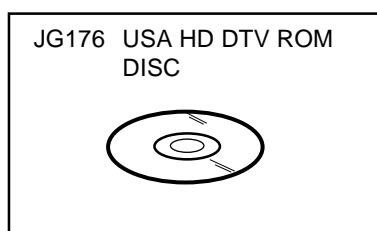
Release date (Example: 2007.01.22)

A = October  
 B = November  
 C = December

When the changed version displays, the Re-write will be completed.

14. Turn off the power

## RE-WRITE FOR DIGITAL SOFT FIRMWARE



Ref. No.	Part No.	Parts Name	Remarks
JG176	APJG176121	2007 USA DTV LCD ROM DISC	Up-Date of the Firmware

1. Copy the "update.dat" in CD to USB Flash Memory.

### Recommended USB Flash Memory

- SanDisk Cruzer Mini USB Flash Drive 128Mb
- SanDisk Cruzer Mini USB Flash Drive 256Mb
- SanDisk Cruzer Micoro USB Flash Drive 128Mb
- SanDisk Cruzer Micoro USB Flash Drive 256Mb
- TwinMos ModileDisk3 128Mb (USB 2.0)
- TwinMos ModileDisk3 256Mb (USB 2.0)

**NOTE:** After Format is done with FAT32 File system beforehand, USB Flash Memory is used.  
The computer of WINDOWS2000 is used.

2. Confirm that the AC cord is plugged out.
3. Set the minus driver to the topside of the USB connector cover, remove the USB connector cover. Insert the USB Flash Memory to USB connector. (Refer to Fig.1)

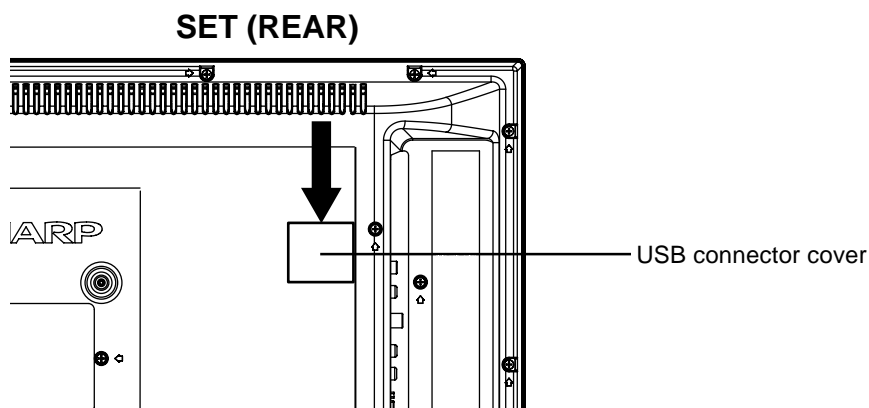


Fig.1

4. Insert the AC CORD of the set and turn on the power. The Up-Date will start automatically. During the writing, "PLEASE WAIT" will appear on the screen.
  5. After the Up-Date, the screen will return to normal screen.
  6. Turn off the power.
  7. Unplug the AC CORD, and remove the USB Flash Memory.
  8. Insert the AC CORD again.
- After the data input, set to the initializing of shipping.**
9. Turn on the power.
  10. Press both Channel button (1) on the remote control and the VOLUME DOWN button on the set for more than 2 seconds. The unit will now have the correct DATA for the new DIGITAL SOFT FIRMWARE.



## WHEN REPLACING EEPROM (MEMORY) IC

### CONFIRMATION OF CHECK SUM, POWER ON TOTAL HOURS AND MICON VERSION

Initial total of MEMORY IC, POWER ON total hours and MICON VERSION can be checked on the screen. Total hours are displayed in 16 system of notation.

**NOTE: If you set a factory initialization, the total hours is reset to "0".**

**Please refer to "CONFIRMATION OF INITIAL DATA" when SUM DATA is not corresponding.**

1. Turn on the POWER, and set to the TV mode.
2. Set the VOLUME to minimum.
3. Press both VOL. DOWN button on the set and Channel button **(8)** on the remote control for more than 2 seconds.
4. After the confirmation of each check sum, turn off the power.

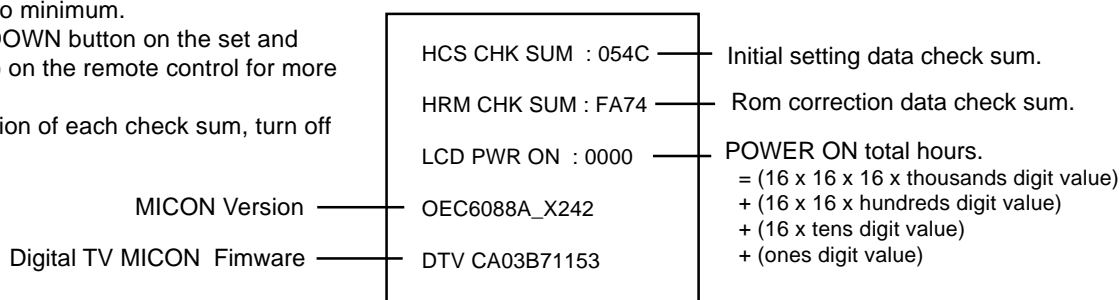


FIG. 1

### CONFIRMATION OF INITIAL DATA

If a service repair is undertaken where it has been required to change the MEMORY IC, the following steps should be taken to ensure correct data settings while making reference to INITIAL SETTING TABLE (Attached "INITIAL DATA").

1. Turn on the POWER, and set to the TV mode.
2. Set the VOLUME to minimum.
3. Press both VOL. DOWN button on the set and Channel button **(6)** on the remote control for more than 2 seconds. ADDRESS and DATA should appear as FIG 2.

	ADDRESS	DATA
HCS	00	0A
HRM	0600	02
OEC6088A_X242		
DTV CA03B71153		

FIG. 2

4. ADDRESS is now selected and should "blink". Using the UP/DOWN button on the remote, step through the ADDRESS until
5. Press RIGHT/LEFT button to select DATA. When DATA is selected, it will "blink".
6. Again, step through the DATA using UP/DOWN button until required DATA value has been selected.
7. Pressing RIGHT/LEFT button will take you back to ADDRESS for further selection if necessary.
8. Repeat steps 4 to 6 until all data has been checked.  
When satisfied correct DATA has been entered, turn POWER off (return to STANDBY MODE) to finish DATA input.

After the data input, set to the initializing of shipping.

9. Turn POWER on.
10. Press both VOL. DOWN button on the set and Channel button **(1)** on the remote control for more than 2 seconds.
11. After the finishing of the initializing of shipping, the unit will turn off automatically.  
The unit will now have the correct DATA for the new MEMORY IC.

# ELECTRICAL ADJUSTMENTS

## 1. ADJUSTMENT PROCEDURE

Read and perform these adjustments when repairing the circuits or replacing electrical parts or PCB assemblies.

### CAUTION

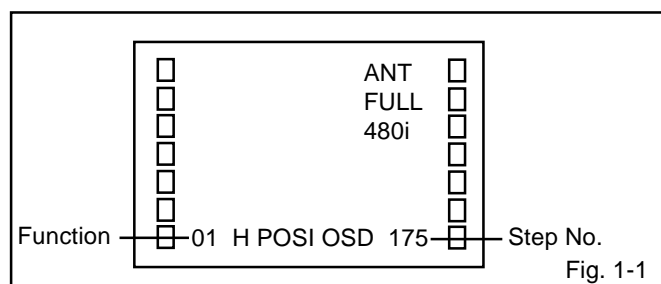
- Use an isolation transformer when performing any service on this chassis.
- When removing a PCB or related component, after unfastening or changing a wire, be sure to put the wire back in its original position.
- When you exchange IC and Transistor with a heat sink, apply silicon grease on the contact section of the heat sink. Before applying new silicon grease, remove all the old silicon grease. (Old grease may cause damages to the IC and Transistor).

**Prepare the following measurement tools for electrical adjustments.**

1. Pattern Generator

### On-Screen Display Adjustment

1. Set the VOLUME to minimum.
2. Press the VOL. DOWN button on the set and the channel button **(9)** on the remote control for more than 2 seconds to display adjustment mode on the screen as shown in **Fig. 1-1**.



3. Use the Channel UP/DOWN button or Channel button **(0-9)** on the remote control to select the options shown in **Fig. 1-2**.
4. Press the MENU button on the remote control to end the adjustments.
5. To display the adjustment screen for ANT, AV, COLOR STREAM HD, HDMI and PC mode, press the INPUT button on the remote control.  
To display the adjustment screen for DVD mode, press the TV/DVD button on the remote control.  
Press the VOL.DOWN button on the set and the channel **(9)** on the remote control for more than 2 seconds.

NO.	FUNCTION	NO.	FUNCTION
01	H POSI OSD	21	H POSI 60Hz
02	V POSI OSD	22	V POSI 60Hz
03	R DRIVE(N)	23	BAK LIGHT CENT
04	R CUT OFF(N)	24	BAK LIGHT MAX
05	G DRIVE(N)	25	BAK LIGHT MIN
06	G CUT OFF(N)	26	BRIGHT CENT
07	B DRIVE(N)	27	BRIGHT MAX
08	B CUT OFF(N)	28	BRIGHT MIN
09	R DRIVE(C)	29	TINT
10	R CUT OFF(C)	30	SHARP CENT
11	G DRIVE(C)	31	SHARP MAX
12	G CUT OFF(C)	32	SHARP MIN
13	B DRIVE(C)	33	CONTRAST CENT
14	B CUT OFF(C)	34	CONTRAST MAX
15	R DRIVE(W)	35	CONTRAST MIN
16	R CUT OFF(W)	36	COLOR CENT
17	G DRIVE(W)	37	COLOR MAX
18	G CUT OFF(W)	38	COLOR MIN
19	B DRIVE(W)	39	CONTRAST 40
20	B CUT OFF(W)	40	FILCKER TEST

Fig. 1-2

## 2. BASIC ADJUSTMENTS

### 2-1: CONTRAST MAX

1. Receive the monoscope pattern. (RF Input)
2. Using the remote control, set the brightness and contrast to normal position.
3. Activate the adjustment mode display of **Fig. 1-1** and press the channel button **(34)** on the remote control to select "CONTRAST MAX".
4. Press the LEFT/RIGTH button on the remote control until the contrast step No. becomes "137"
5. Receive a broadcast and check if the picture is normal.
6. Press the INPUT button on the remote control to set to the AV mode.
7. Using the remote control, set the brightness and contrast to normal position.
8. Activate the adjustment mode display of **Fig. 1-1** and press the channel button **(34)** on the remote control to select "CONTRAST MAX".
9. Press the LEFT/RIGTH button on the remote control until the contrast step No. becomes "177"
10. Receive a broadcast and check if the picture is normal.
11. Playback the DVD(480i) disc. (COMPONENT input)
12. Press the INPUT button on the remote control to set to the COLOR STREAM HD mode.
13. Using the remote control, set the brightness and contrast to normal position.
14. Activate the adjustment mode display of **Fig. 1-1** and press the channel button **(34)** on the remote control to select "CONTRAST MAX".
15. Press the LEFT/RIGTH button on the remote control until the contrast step No. becomes "152"
16. Playback the DVD(480p) disc. (COMPONENT input)
17. Press the TV/DVD button on the remote control to set to the DVD mode. Then perform the above adjustments 6~9.

## ELECTRICAL ADJUSTMENTS

### 2-2: WHITE BALANCE

1. Place the set in Aging Test for more than 15 minutes.
2. Receive the gray scale pattern from the Pattern Generator.
3. Using the remote control, set the brightness and contrast to normal position.
4. Activate the adjustment mode display of **Fig. 1-1** and press the channel button **(03)** on the remote control to select "R DRIVE(N)".
5. Press the CH. UP/DOWN button on the remote control to select the "R CUT OFF(N)", "B DRIVE(N)", "B CUT OFF(N)", "R DRIVE(C)", "R CUT OFF(C)", "B DRIVE(C)", "B CUT OFF(C)", "R DRIVE(W)", "R CUT OFF(W)", "B DRIVE(W)" or "B CUT OFF(W)".
6. Adjust the LEFT/RIGTH button on the remote control to whiten the R CUT OFF(N), B DRIVE(N), B CUT OFF(N), R DRIVE(C), R CUT OFF(C)", B DRIVE(C), B CUT OFF(C), R DRIVE(W), R CUT OFF(W), B DRIVE(W) and B CUT OFF(W) at each step tone sections equally.
7. Perform the above adjustments 5 and 6 until the white achieved.

### 2-3: BRIGHT CENTER

1. Receive the monoscope pattern. (RF Input)
2. Press the INPUT button on the remote control to set to the ANT mode.
3. Set the screen mode to FULL.
4. Using the remote control, set the brightness and contrast to normal position.
5. Activate the adjustment mode display of **Fig. 1-1** press
6. the channel button **(26)** on the remote control to select "BRIGHT CENT".
7. Press the LEFT/RIGTH button on the remote control until the screen begin to shine.
8. Receive the monoscope pattern. (VIDEO Input)
9. Press the INPUT button on the remote control to set to the AV mode. Then perform the above adjustments 2~7.
10. Playback the DVD(480i) disc. (COMPONENT Input)
11. Press the INPUT button on the remote control to set to the COLOR STREAM HD mode. Then perform the above adjustments 2~7.
12. Playback the DVD(480p) disc. (COMPONENT Input)
13. Press the TV/DVD button on the remote control to set to the DVD mode. Then perform the above adjustments 2~7.

ELECTRICAL ADJUSTMENTS

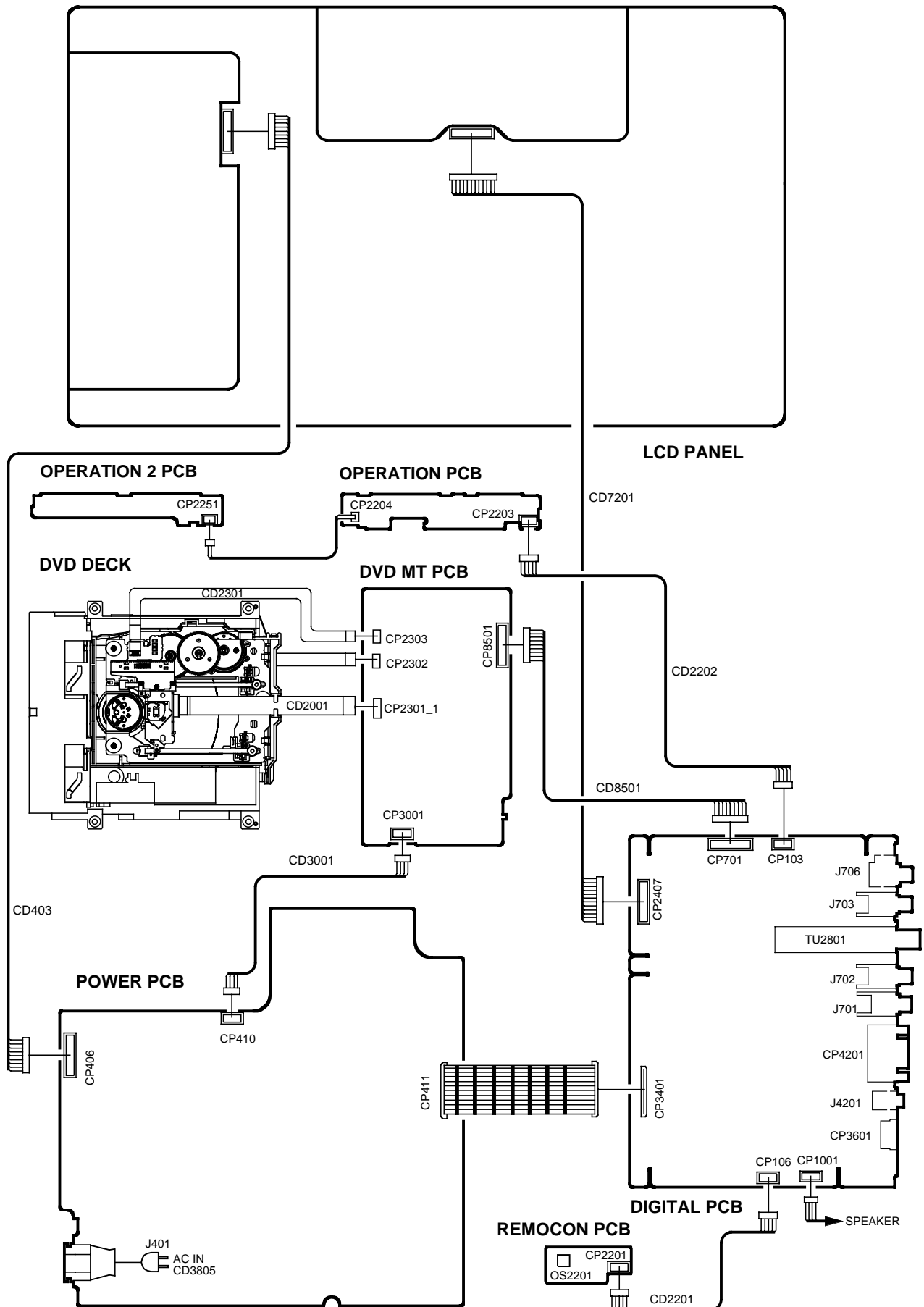
2-4: Confirmation of Fixed Value (Step No.)

Please check if the fixed values of each of the adjustment item is set correctly referring below.  
(ANT/AV/COLORSTREAM HD/PC/DVD/DIGITAL)

NO.	FUNCTION	ANT	AV		COLORSTREAM HD				HDMI					PC								DVD	DIGITAL			
			CVBS	S(Y/C)	480i	480p	720p	108i	VGA	480i	480p	720p	1080i	640*480	720*400	800*600	1024*768	1280*768	1280*720	852*480	1360*768		480i	480p	720p	108i
		Step No.																								
1	H POSI OSD	175	175	175	175	175	175	175	175	175	175	175	175	175	175	175	175	175	175	175	175	175	175	175	175	
2	V POSI OSD	128	128	128	128	128	128	128	128	128	128	128	128	128	128	128	128	128	128	128	128	128	128	128	128	
3	R.DRIVE ( N )	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	128	128	128	128	128	128	128	128	ADJ	ADJ	ADJ	ADJ	
4	R CUTOFF ( N )	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	-	-	-	-	-	-	-	-	ADJ	ADJ	ADJ	ADJ	
5	G DRIVE ( N )	128	128	128	128	128	128	128	128	128	128	128	128	128	128	128	128	128	128	128	128	128	128	128	128	
6	G CUTOFF ( N )	128	128	128	128	128	128	128	128	128	128	128	128	-	-	-	-	-	-	-	-	128	128	128	128	
7	B DRIVE ( N )	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	128	128	128	128	128	128	128	128	ADJ	ADJ	ADJ	ADJ	
8	B CUTOFF ( N )	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	-	-	-	-	-	-	-	-	ADJ	ADJ	ADJ	ADJ	
9	R.DRIVE ( C )	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	-	-	-	-	-	-	-	-	ADJ	ADJ	ADJ	ADJ	
10	R CUTOFF ( C )	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	-	-	-	-	-	-	-	-	ADJ	ADJ	ADJ	ADJ	
11	G DRIVE ( C )	128	128	128	128	128	128	128	128	128	128	128	128	-	-	-	-	-	-	-	-	128	128	128	128	
12	G CUTOFF ( C )	128	128	128	128	128	128	128	128	128	128	128	128	-	-	-	-	-	-	-	-	128	128	128	128	
13	B DRIVE ( C )	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	-	-	-	-	-	-	-	-	ADJ	ADJ	ADJ	ADJ	
14	B CUTOFF ( C )	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	-	-	-	-	-	-	-	-	ADJ	ADJ	ADJ	ADJ	
15	R.DRIVE ( W )	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	-	-	-	-	-	-	-	-	ADJ	ADJ	ADJ	ADJ	
16	R CUTOFF ( W )	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	-	-	-	-	-	-	-	-	ADJ	ADJ	ADJ	ADJ	
17	G DRIVE ( W )	128	128	128	128	128	128	128	128	128	128	128	128	-	-	-	-	-	-	-	-	128	128	128	128	
18	G CUTOFF ( W )	128	128	128	128	128	128	128	128	128	128	128	128	-	-	-	-	-	-	-	-	128	128	128	128	
19	B DRIVE ( W )	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	-	-	-	-	-	-	-	-	ADJ	ADJ	ADJ	ADJ	
20	B CUTOFF ( W )	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	-	-	-	-	-	-	-	-	ADJ	ADJ	ADJ	ADJ	
21	H POSI 60	256	256	256	256	256	256	256	256	256	256	256	256	256	256	256	256	256	256	256	256	256	256	256	256	
22	V POSI 60	128	128	128	128	128	128	128	128	128	128	128	128	128	128	128	128	128	128	128	128	128	128	128	128	
23	BAK LIGHT CENT	120	120	120	120	120	120	120	120	120	120	120	120	120	120	120	120	120	120	120	120	120	120	120	120	
24	BAK LIGHT MAX	240	240	240	240	240	240	240	240	240	240	240	240	240	240	240	240	240	240	240	240	240	240	240	240	
25	BAK LIGHT MIN	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
26	BRIGHT CENT	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	128	128	128	128	128	128	128	128	ADJ	ADJ	ADJ	ADJ	
27	BRIGHT MAX	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	149	149	149	149	149	149	149	149	ADJ	ADJ	ADJ	ADJ	
28	BRIGHT MIN	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	109	109	109	109	109	109	109	109	ADJ	ADJ	ADJ	ADJ	
29	TINT	125	127	127	127	127	127	127	127	127	127	127	127	-	-	-	-	-	-	-	-	127	127	127	127	
30	SHARP CENTER	120	150	150	150	150	150	150	150	150	150	150	150	0	0	0	0	0	0	0	0	150	150	150	210	
31	SHARP MAX	220	250	250	250	250	250	250	250	250	250	250	250	0	0	0	0	0	0	0	0	250	250	250	255	
32	SHARP MIN	20	50	50	50	50	50	50	50	50	50	50	50	0	0	0	0	0	0	0	0	50	50	50	50	
33	CONT CENTER	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	90	90	90	90	90	90	90	90	ADJ	ADJ	ADJ	ADJ	
34	CONT MAX	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	110	110	110	110	110	110	110	110	ADJ	ADJ	ADJ	ADJ	
35	CONT MIN	70	70	70	70	45	45	45	58	58	58	58	58	45	45	45	45	45	45	45	45	70	70	70	70	
36	COLOR CENT	151	151	153	148	136	136	136	146	146	146	146	146	-	-	-	-	-	-	-	-	153	141	141	141	
37	COLOR MAX	210	210	210	210	210	210	210	210	210	210	210	210	-	-	-	-	-	-	-	-	210	210	210	210	
38	COLOR MIN	0	0	0	0	0	0	0	0	0	0	0	0	-	-	-	-	-	-	-	-	0	0	0	0	
39	CONT 40	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	-	-	-	-	-	-	-	-	ADJ	ADJ	ADJ	ADJ	

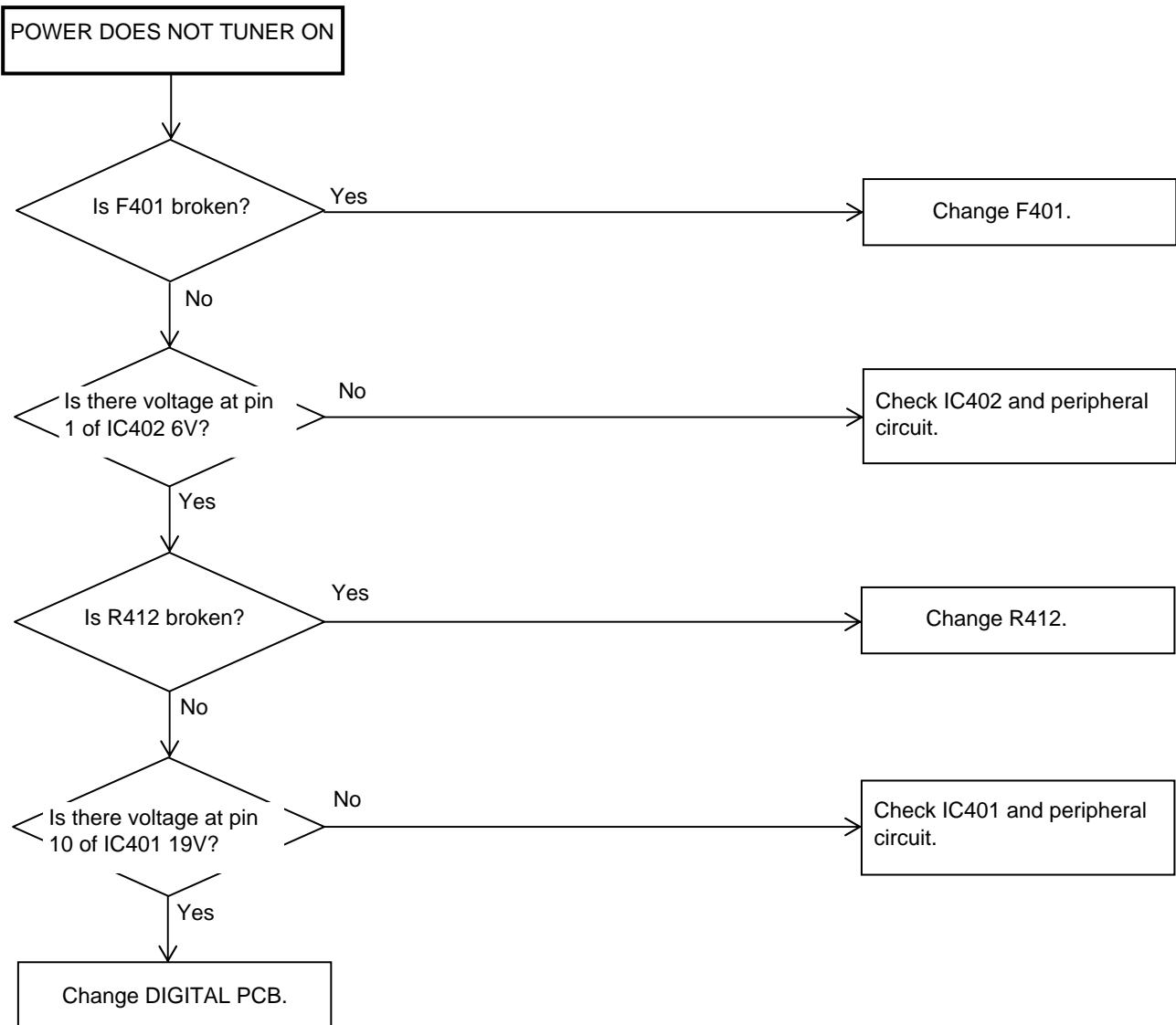
# ELECTRICAL ADJUSTMENTS

## 3. ELECTRICAL ADJUSTMENT PARTS LOCATION GUIDE (WIRING CONNECTION)

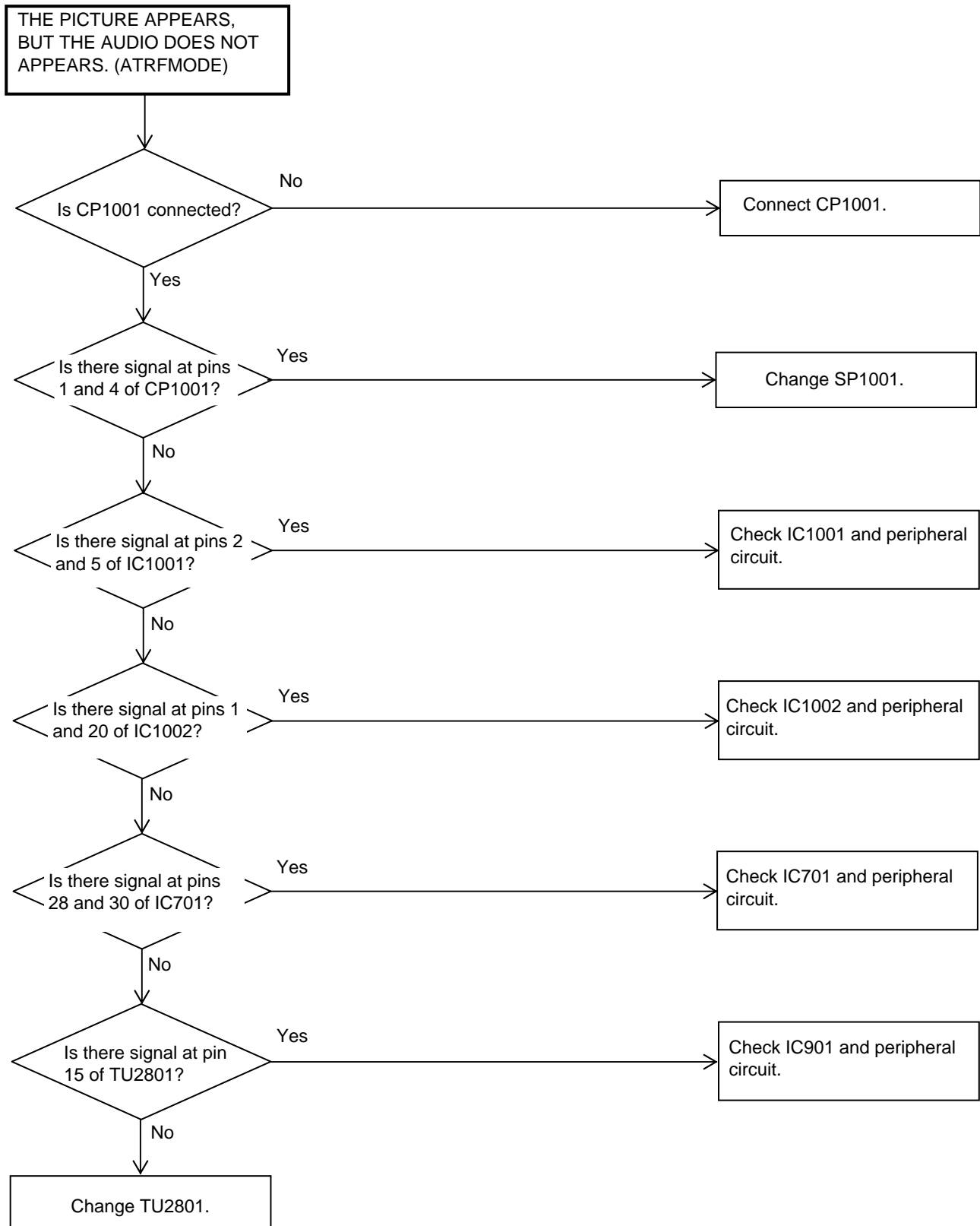


# TROUBLESHOOTING GUIDE

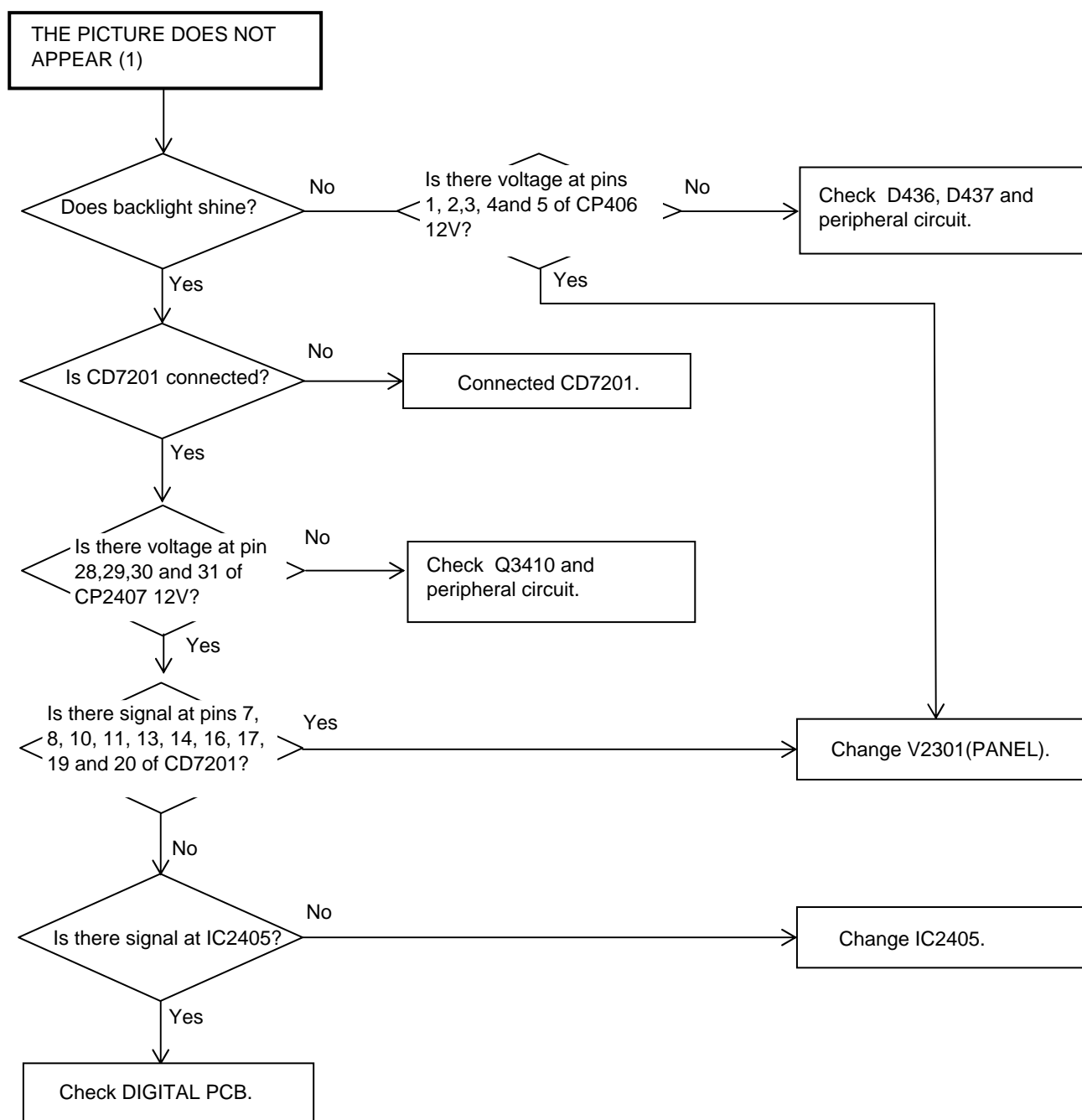
## (LCD SECTION)



## TROUBLESHOOTING GUIDE

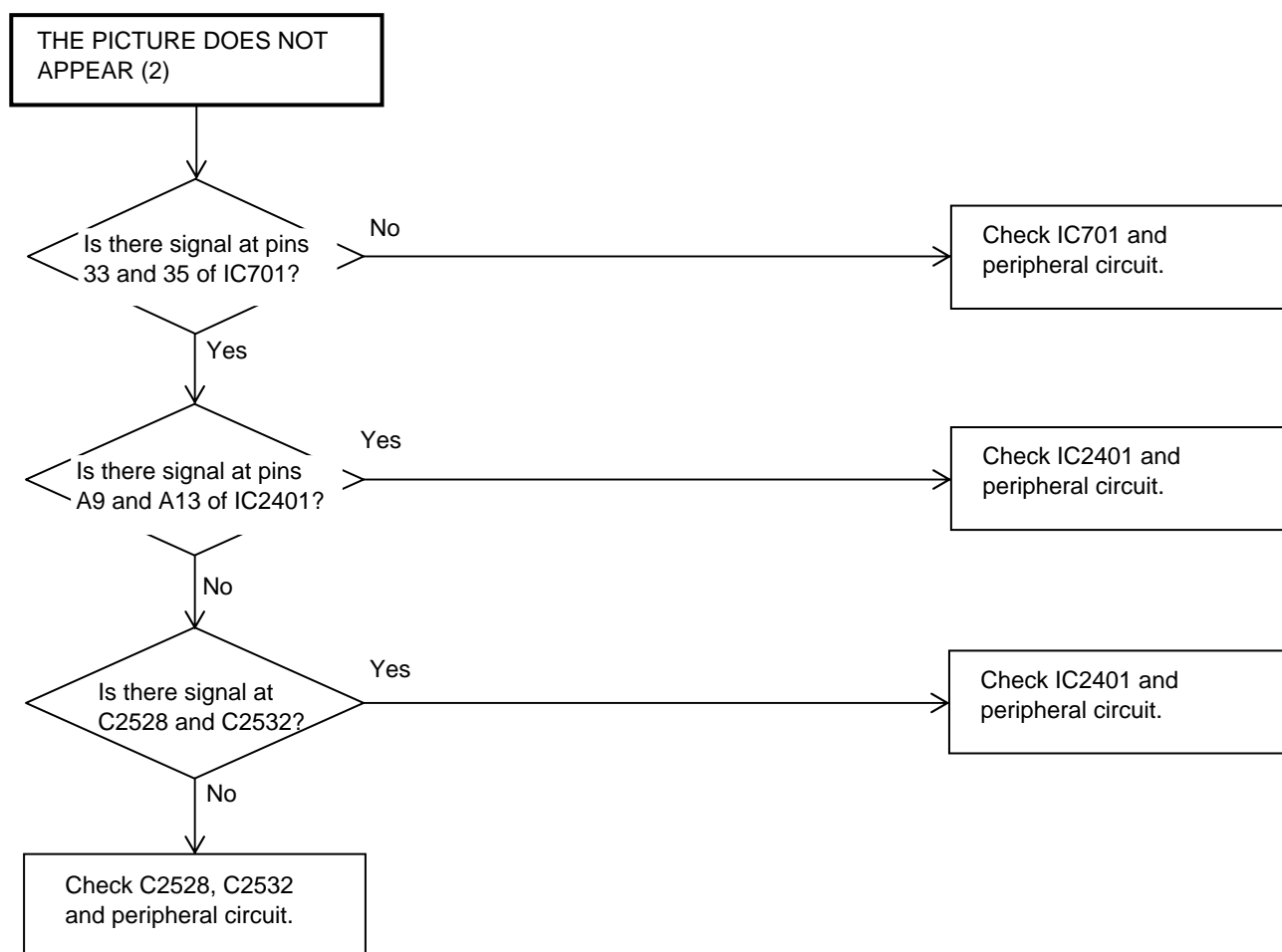


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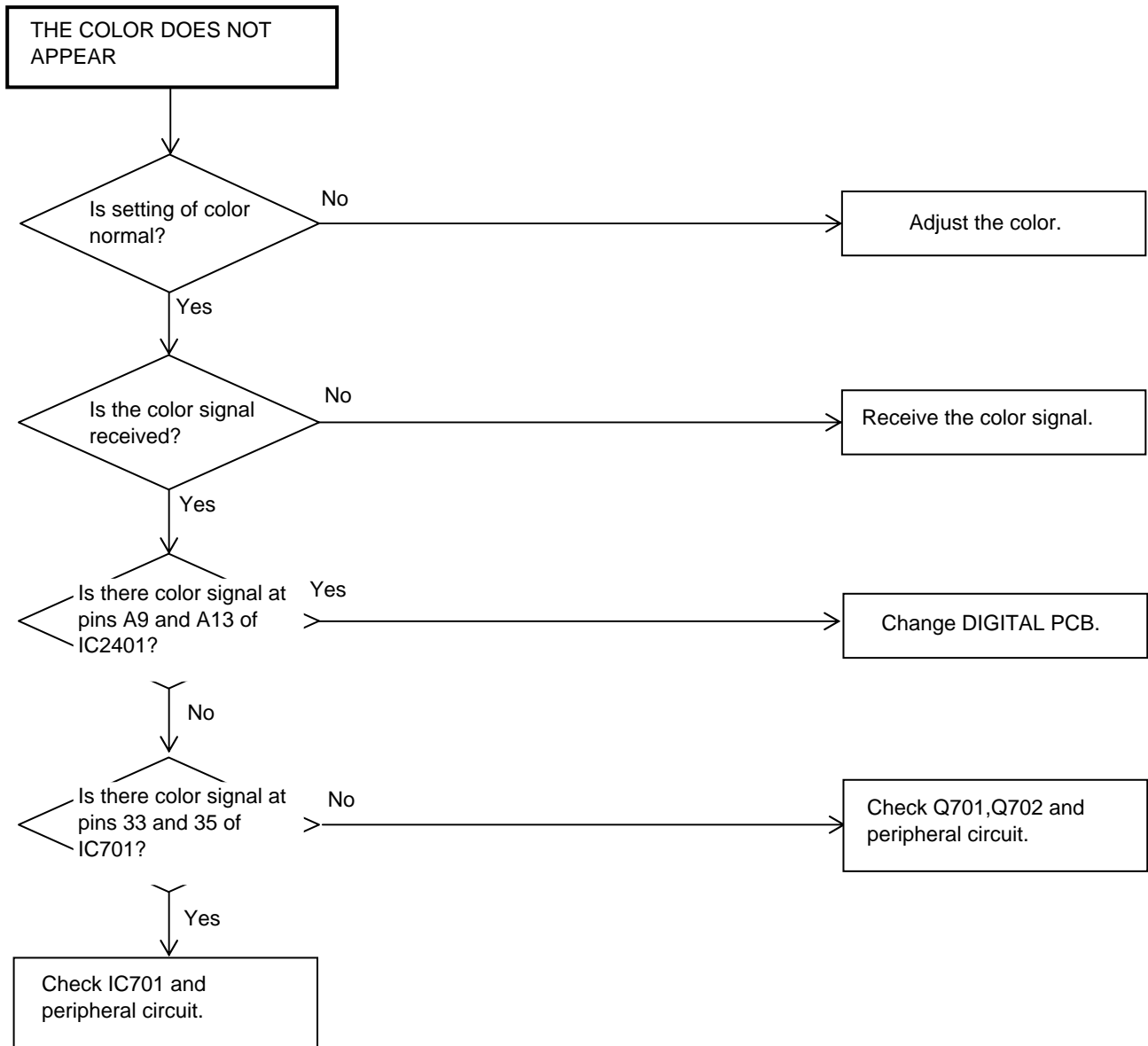




## TROUBLESHOOTING GUIDE

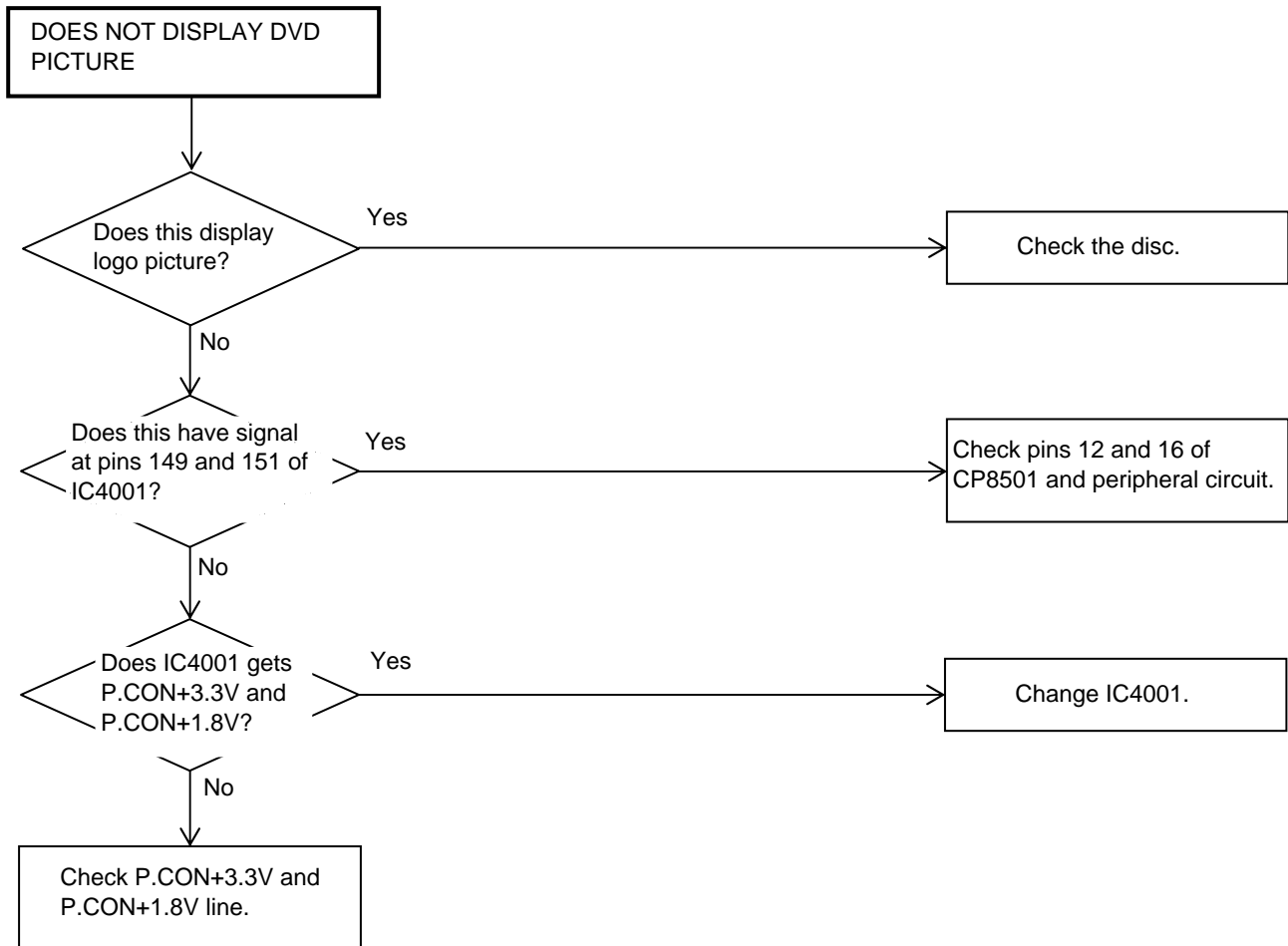


## TROUBLESHOOTING GUIDE

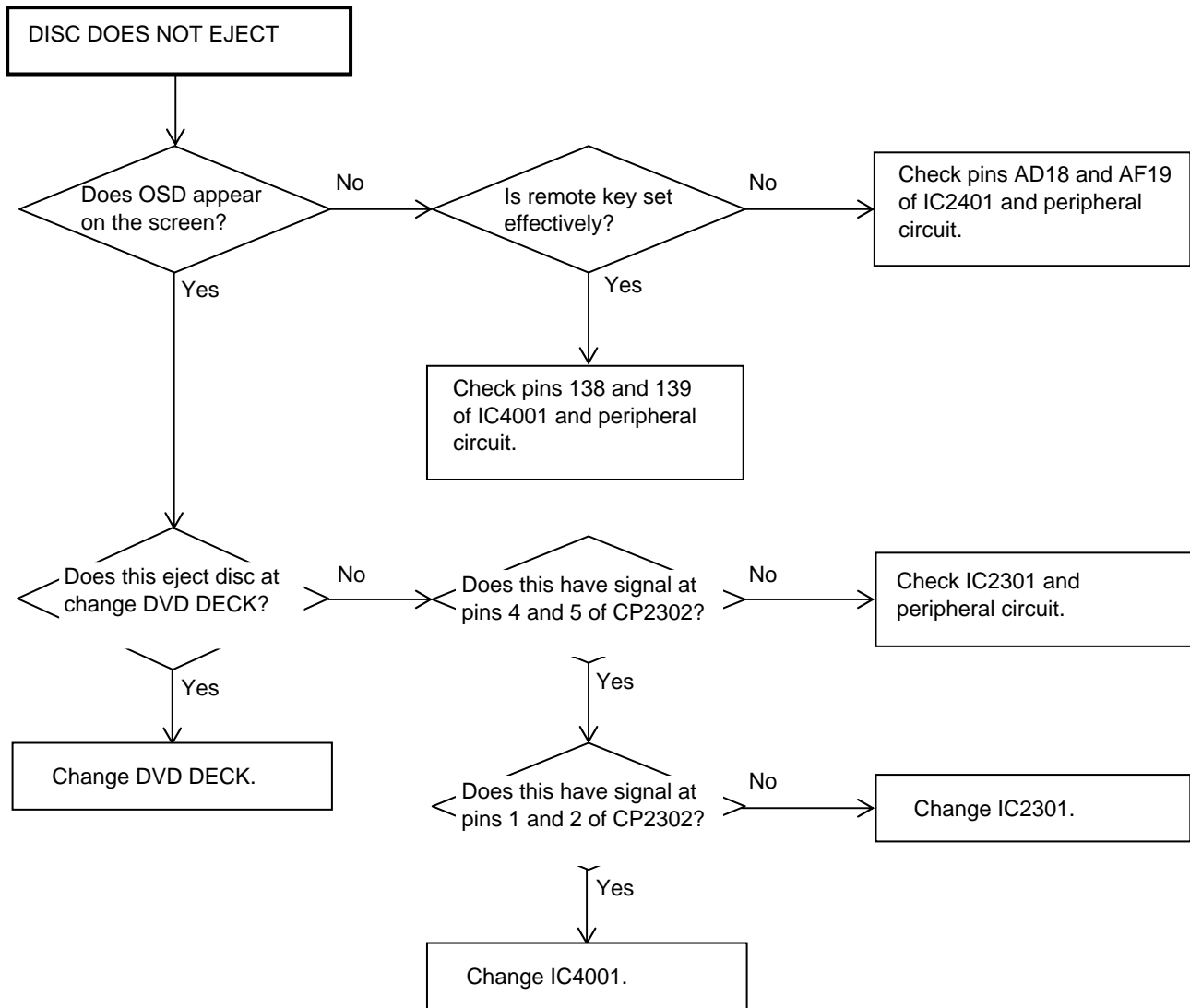


# TROUBLESHOOTING GUIDE

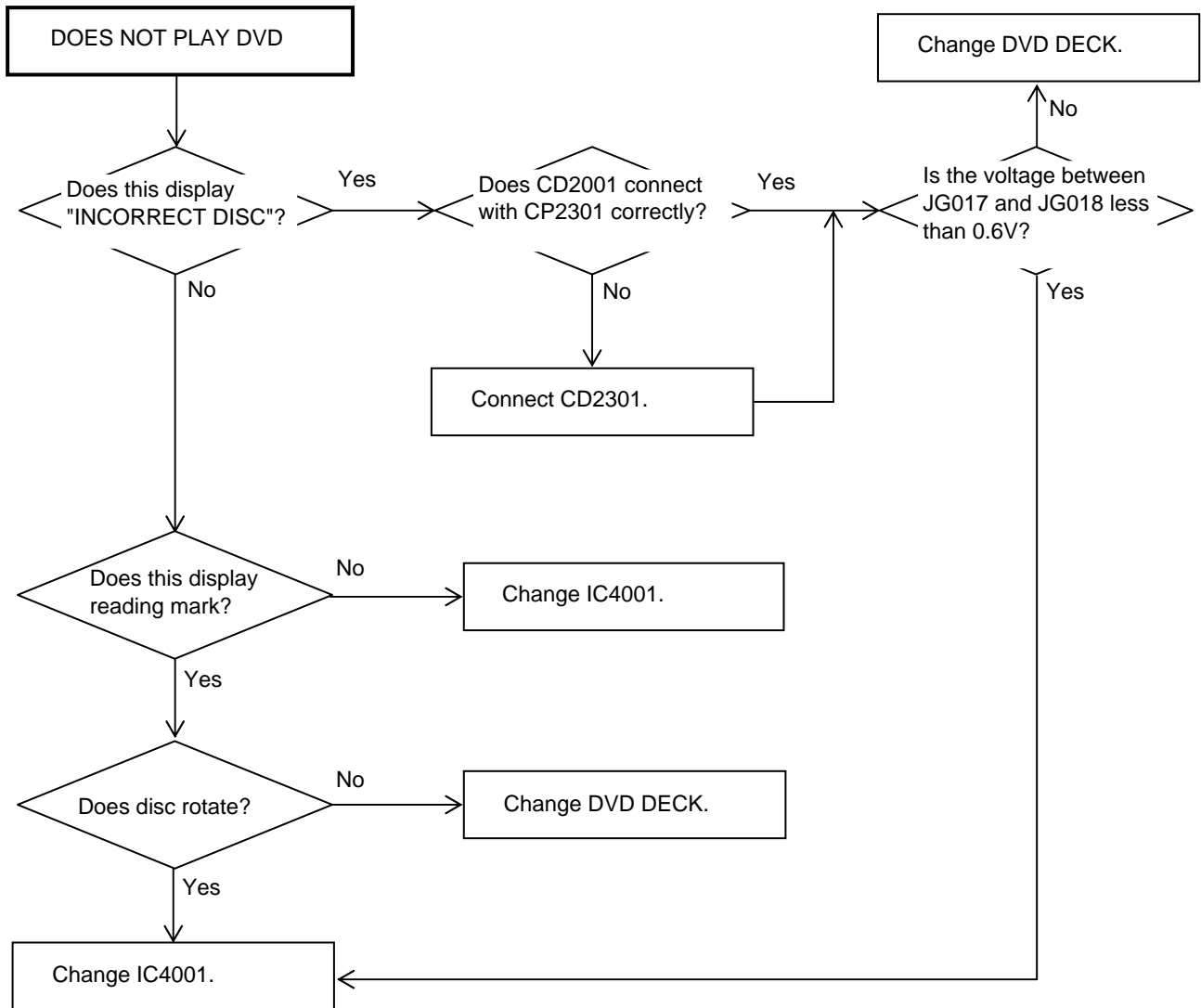
## (DVD SECTION)



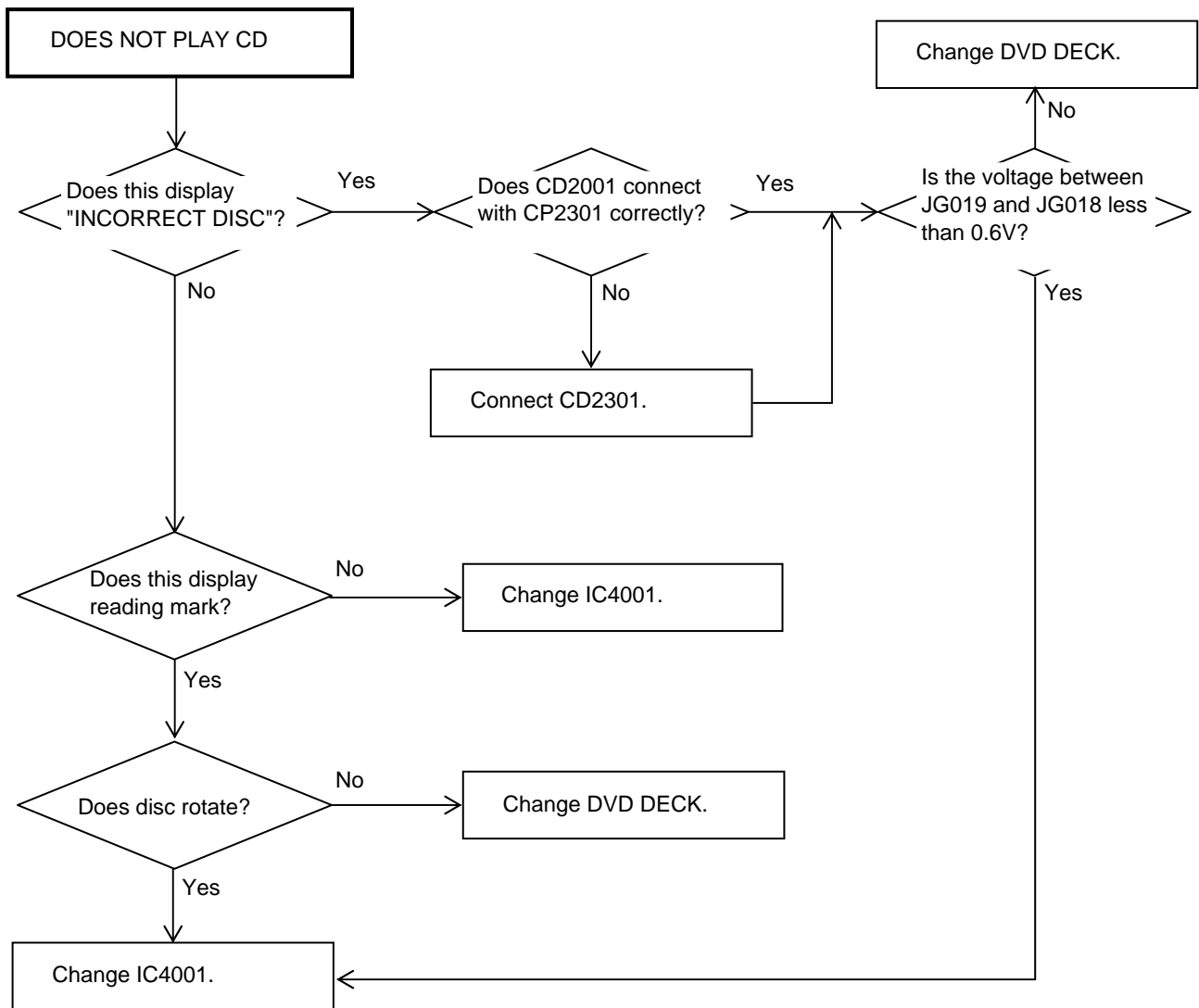
## TROUBLESHOOTING GUIDE



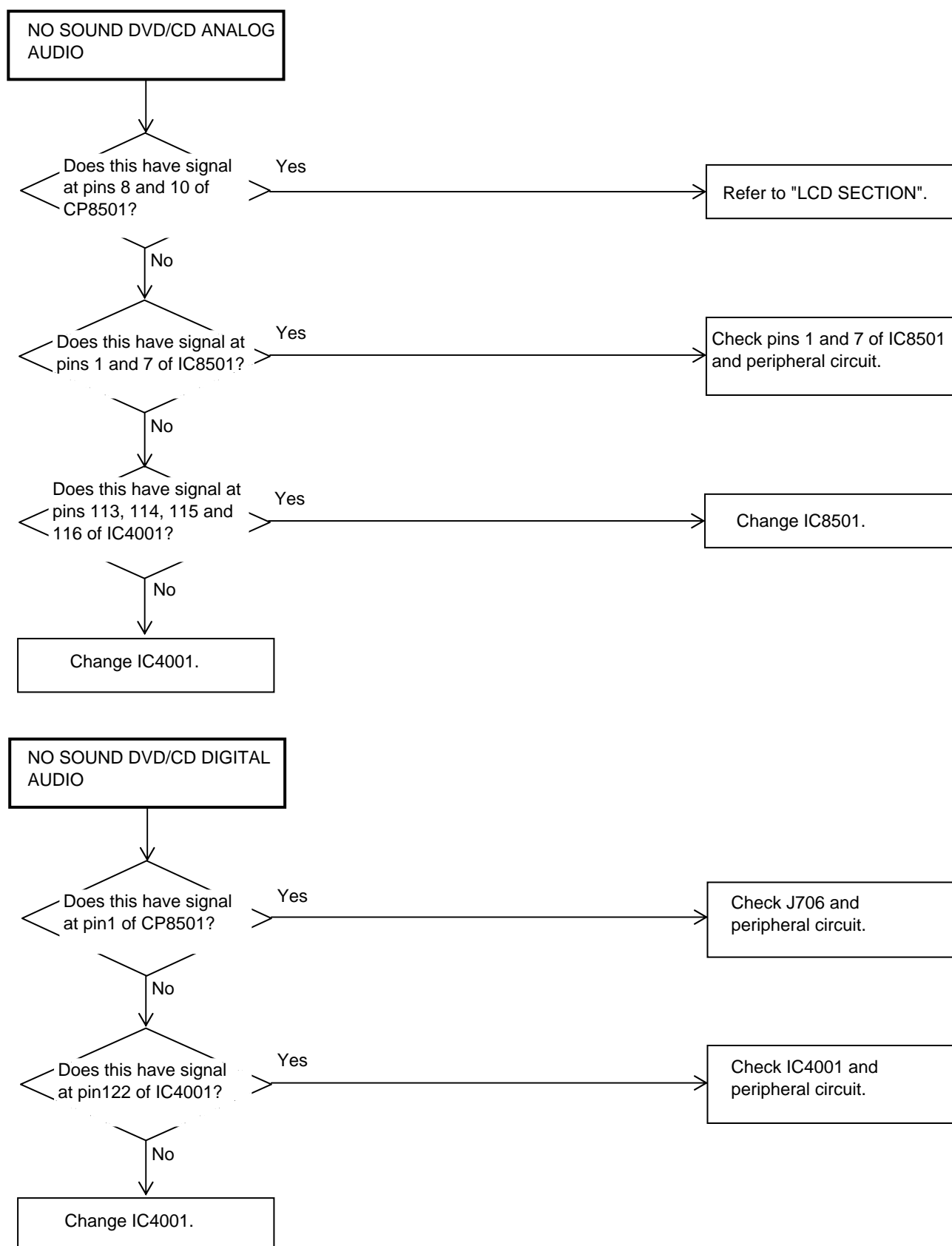
## TROUBLESHOOTING GUIDE



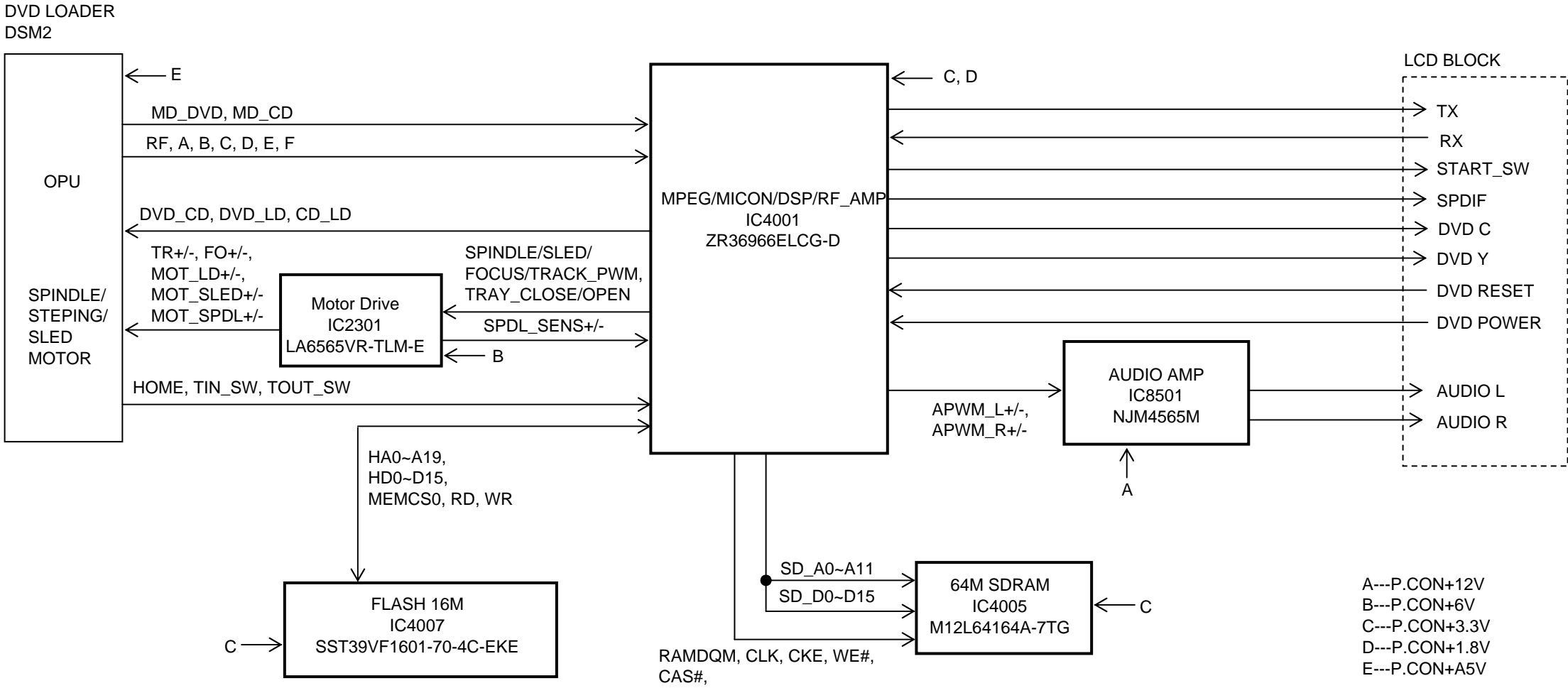
## TROUBLESHOOTING GUIDE



## TROUBLESHOOTING GUIDE

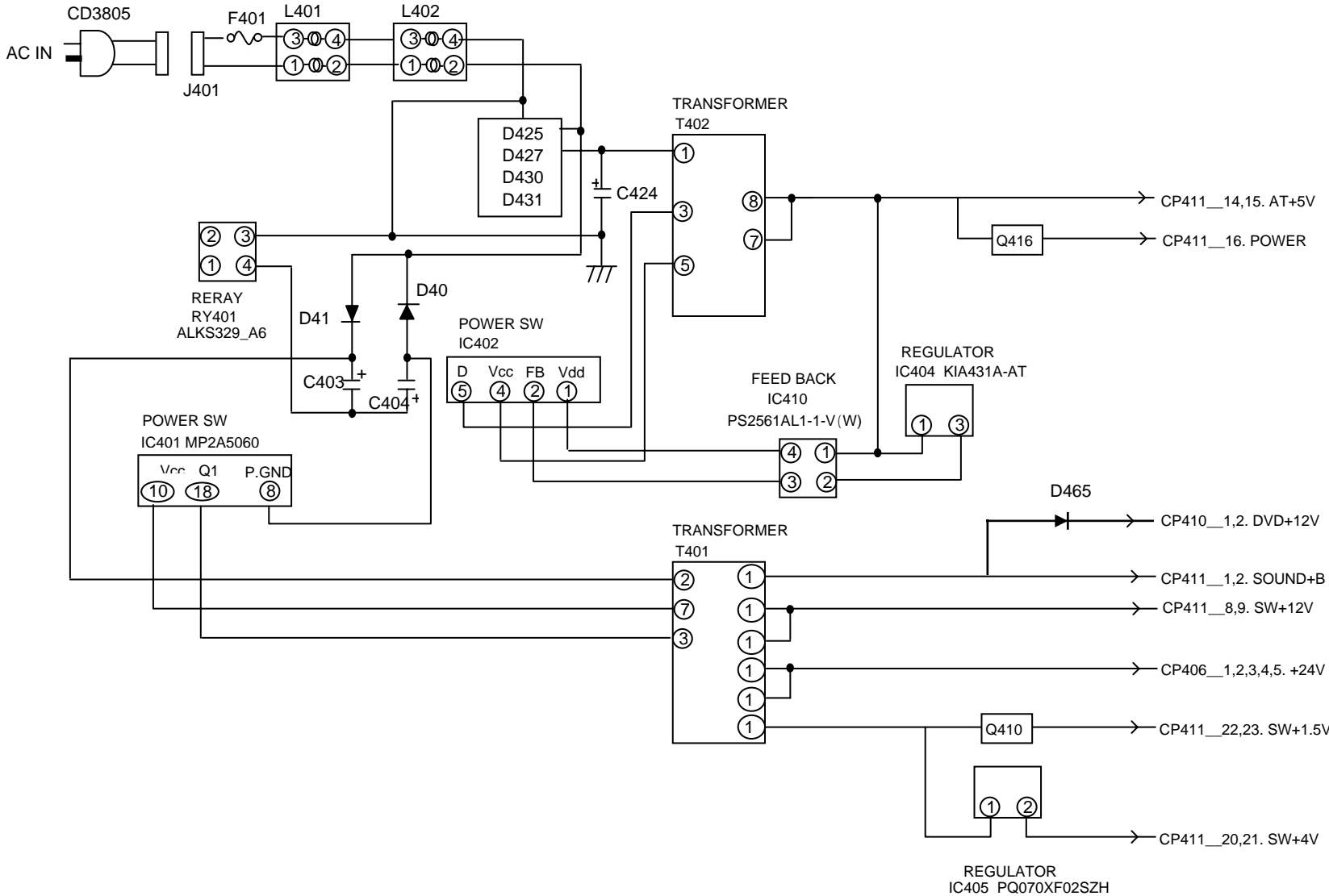


DVD BLOCK DIAGRAM

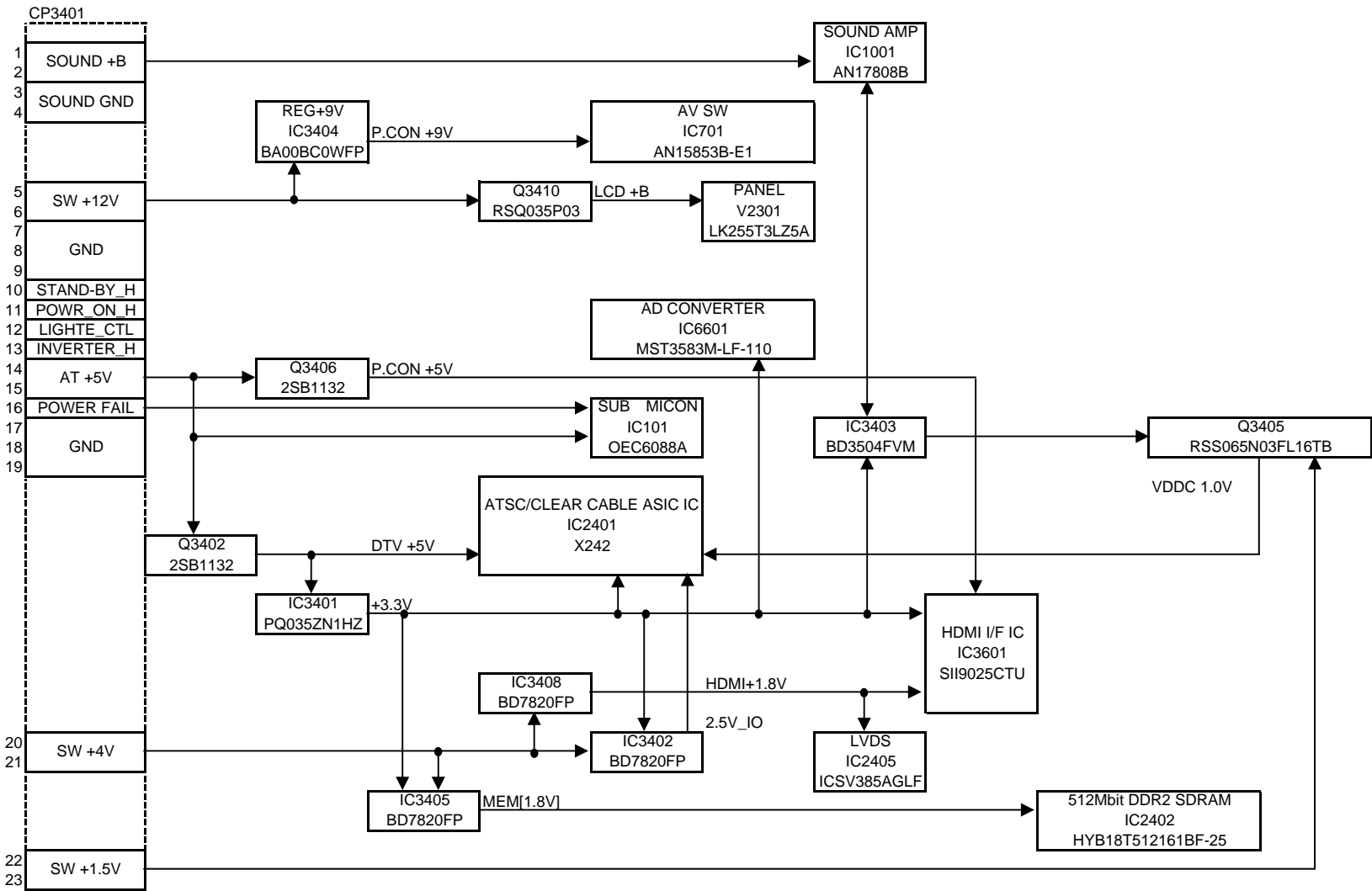




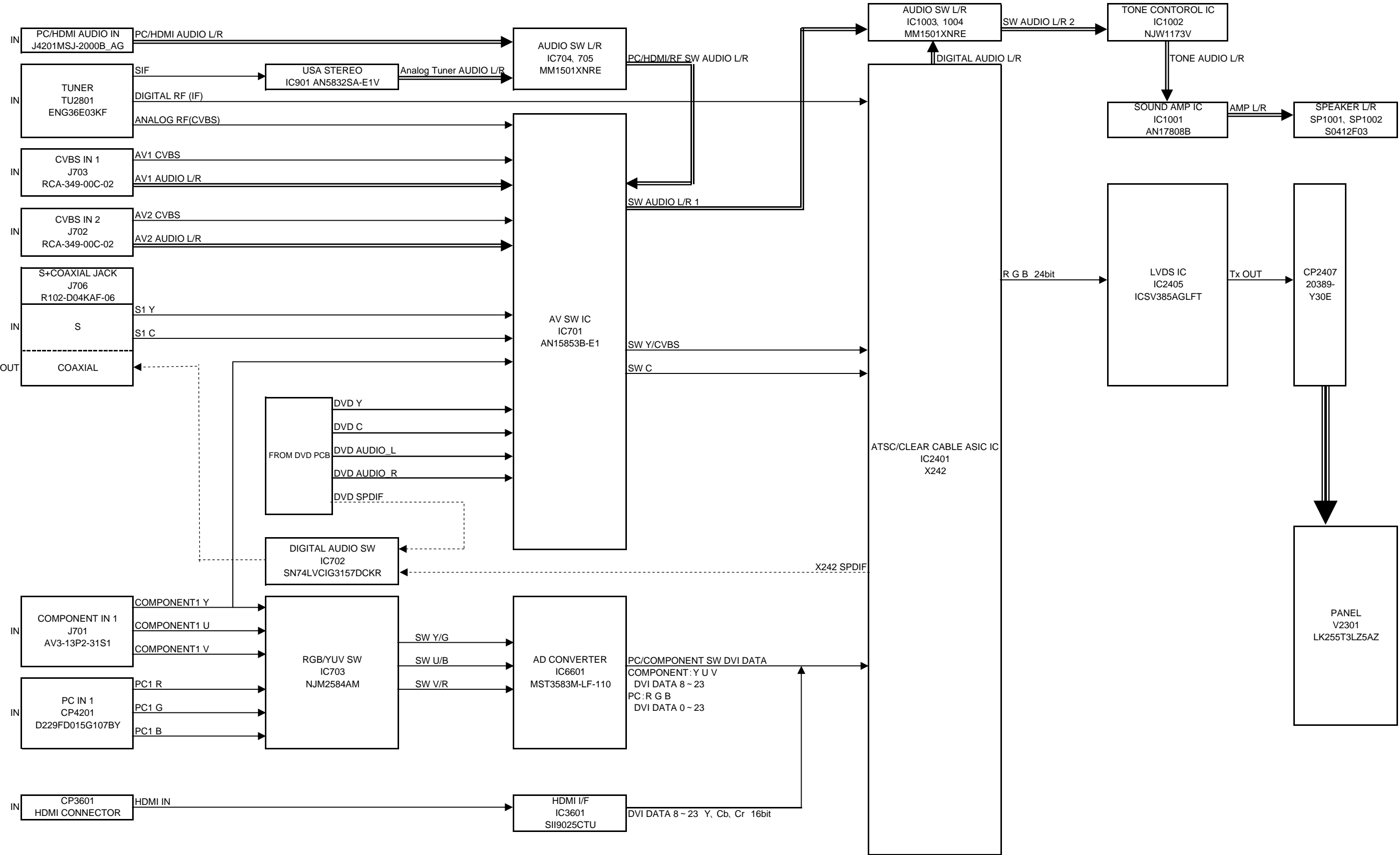
## POWER BLOCK DIAGRAM



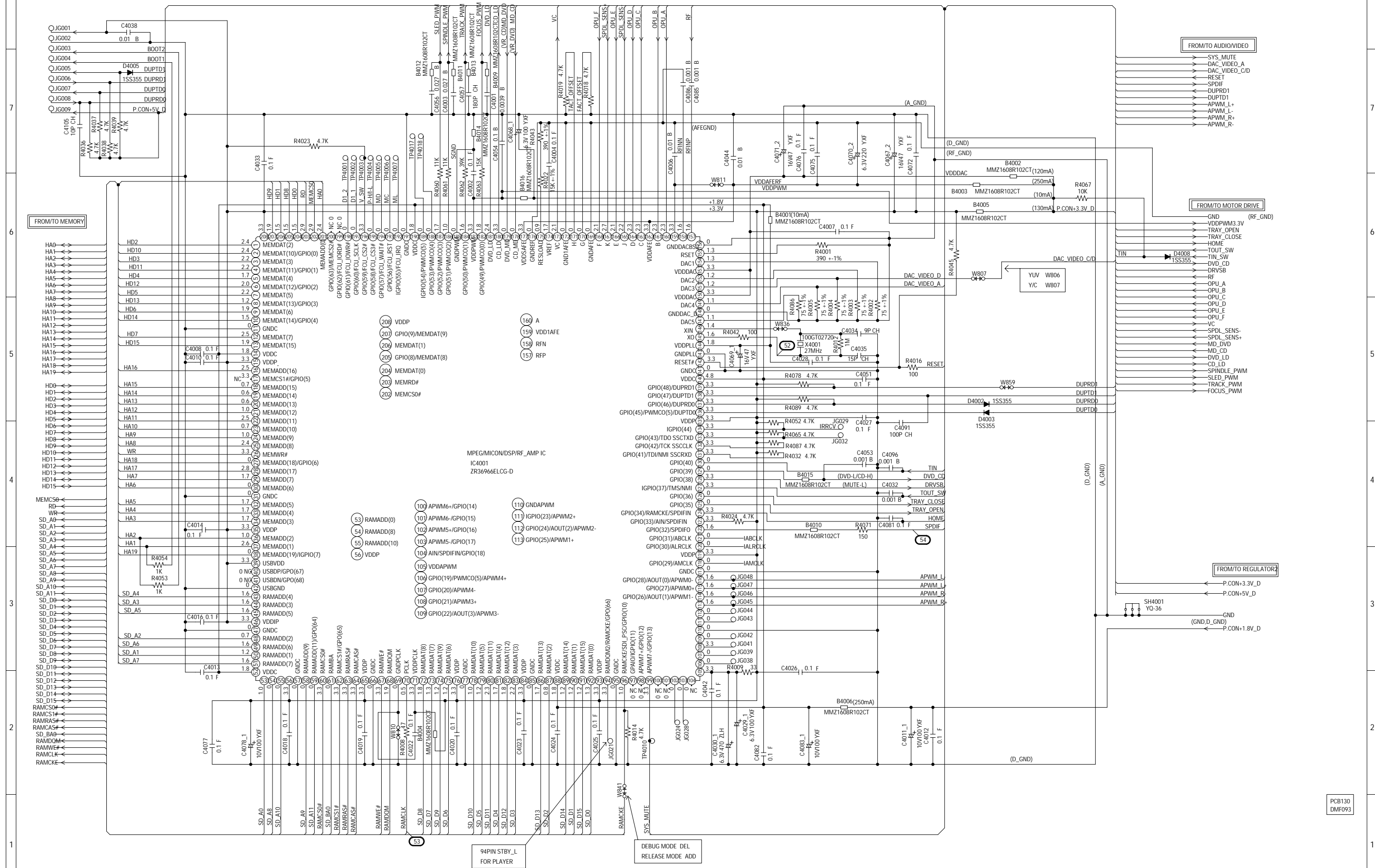
POWER(DIGITAL PCB) BLOCK DIAGRAM



SIGNAL BLOCK DIAGRAM



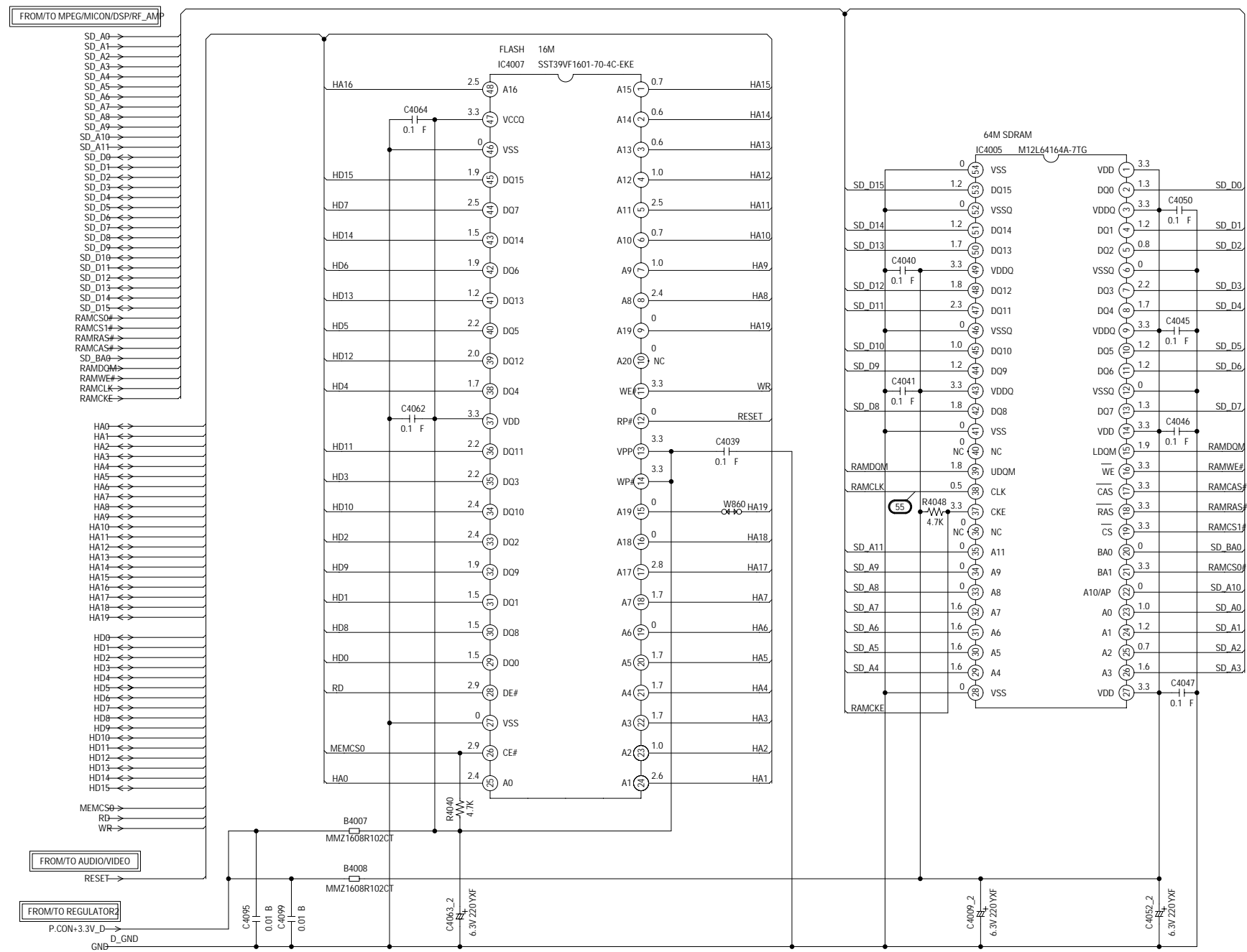
## (DVD MT PCB)



NOTE: THIS SCHEMATIC DIAGRAM IS THE LATEST AT THE TIME OF PRINTING AND SUBJECT TO CHANGE WITHOUT NOTICE.

NOTE:THE DC VOLTAGE EACH PART WAS MEASURED WITH THE DIGITAL TESTER DURING PLAYBACK.

MEMORY SCHEMATIC DIAGRAM  
(DVD MT PCB)

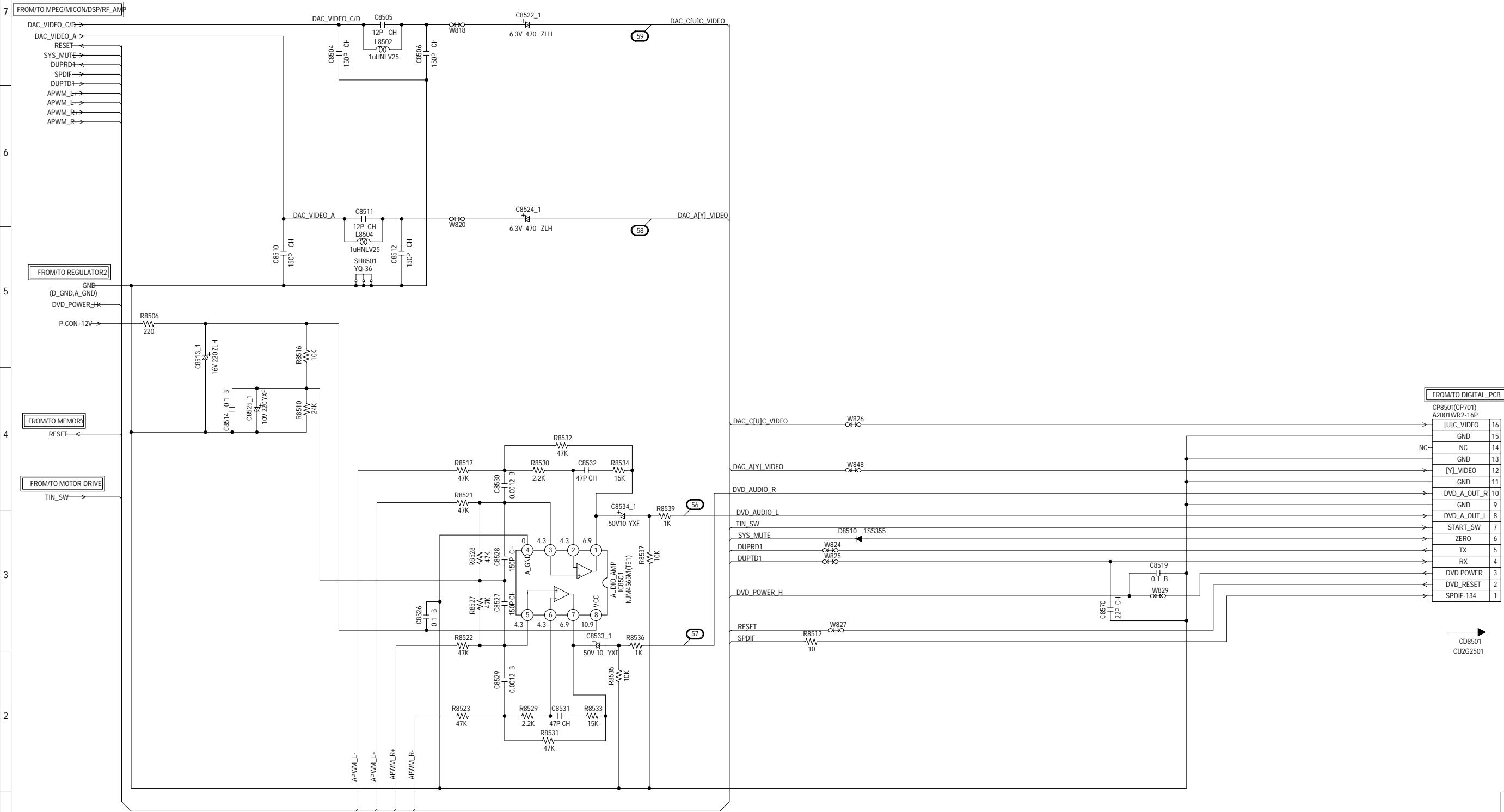


NOTE: THIS SCHEMATIC DIAGRAM IS THE LATEST AT THE TIME  
OF PRINTING AND SUBJECT TO CHANGE WITHOUT NOTICE.

NOTE: THE DC VOLTAGE EACH PART WAS  
MEASURED WITH THE DIGITAL TESTER  
DURING PLAYBACK.

AUDIO/VIDEO SCHEMATIC DIAGRAM  
(DVD MT PCB)

		1	2	3	4
A	DAC4	Y	Y	Y	G
B	DAC2	V	V	(V)	R
C	DAC1	U	U	(U)	B
D	DAC3	C	(C)	C	-
E	DAC5	CVBS	CVBS	CVBS	CVBS




NOTE: THE DC VOLTAGE EACH PART WAS  
MEASURED WITH THE DIGITAL TESTER  
DURING PLAYBACK.

NOTE: THIS SCHEMATIC DIAGRAM IS THE LATEST AT THE TIME  
OF PRINTING AND SUBJECT TO CHANGE WITHOUT NOTICE.

PCB130  
DMF093

## (DVD MT PCB)

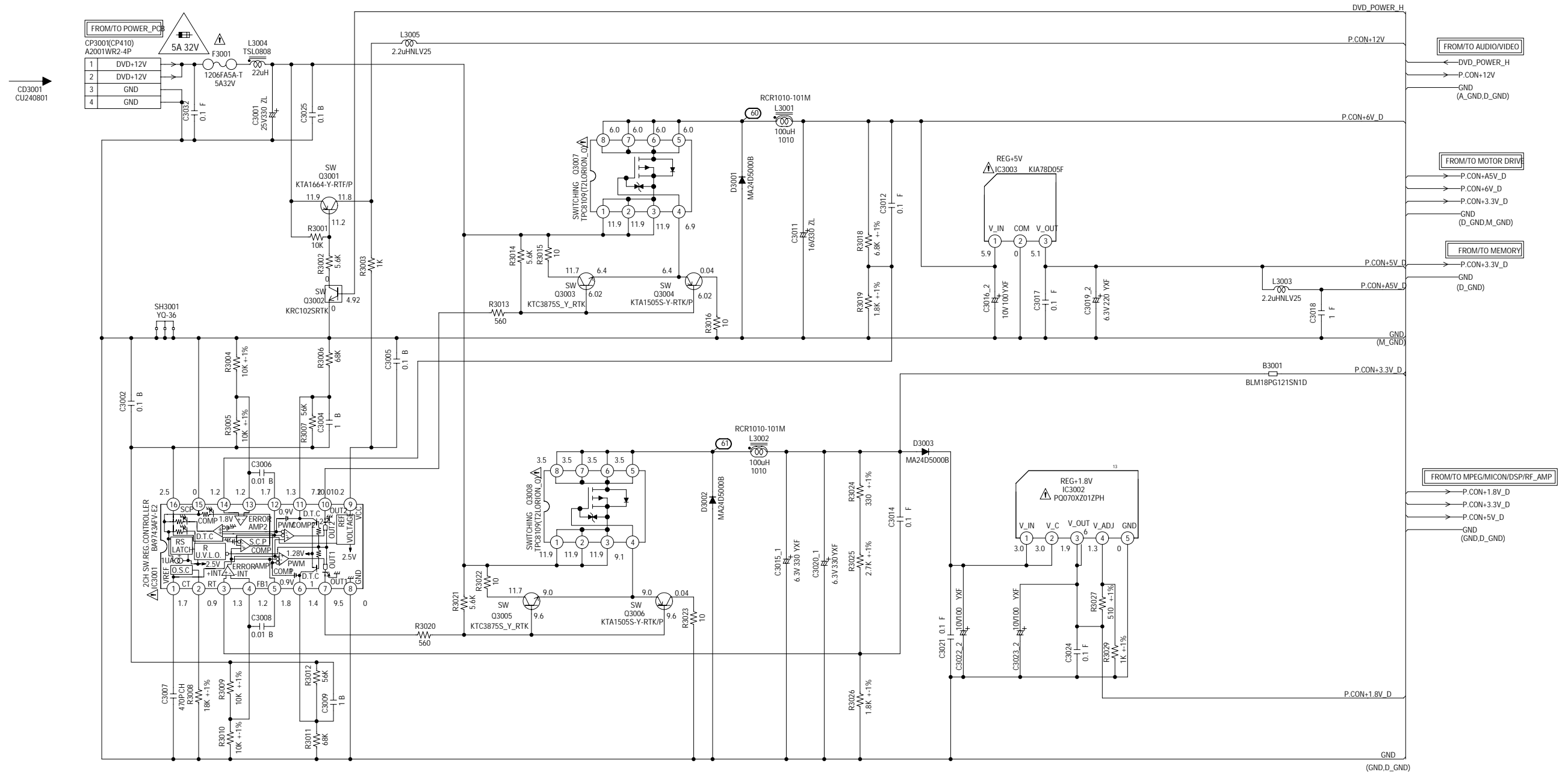


**ATTENTION:** LES PIÈCES RÉPARÉES PAR UN  ÉTANT DANGEREUSES AU POINT DE VUE SÉCURITÉ N'UTILISER QUE CELLES DÉCRITES DANS LA NOMENCLATURE DES PIÈCES.

NOTE:THE DC VOLTAGE EACH PART WAS MEASURED WITH THE DIGITAL TESTER DURING PLAYBACK.

# REGULATOR2 SCHEMATIC DIAGRAM

(DVD TM PCB)



**CAUTION:** FOR CONTINUED PROTECTION AGAINST FIRE HAZARD,  
REPLACE ONLY WITH THE SAME TYPE FUSE 5A 32V (F3001)

**ATTENTION:** POUR UNE PROTECTION CONTINUE LES RISQUES D'INCEIE  
N'UTILISER QUE DES FUSIBLE DE MEME TYPE 5A 32V (F3001)

**CAUTION:** F3001 IS MANUFACTURED BY COOPER INDUSTRIES INC.,  
TYPE 1206FA-T.

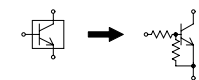
**CAUTION:** SINCE THESE PARTS MARKED BY ARE  
CRITICAL FOR SAFETY, USE ONES  
DESCRIBED IN PARTS LIST ONLY.

**ATTENTION:** LES PIECES REPARÉES PAR UN ÉTANT  
DANGEREUSES AN POINT DE VUE SECURITE  
N'UTILISER QUE CELLS DECRITES  
DANS LA NOMENCLATURE DES PIECES.

NOTE: THIS SCHEMATIC DIAGRAM IS THE LATEST AT THE TIME  
OF PRINTING AND SUBJECT TO CHANGE WITHOUT NOTICE.

NOTE: THE DC VOLTAGE EACH PART WAS  
MEASURED WITH THE DIGITAL TESTER  
DURING PLAYBACK.

CAUTION: DIGITAL TRANSISTOR

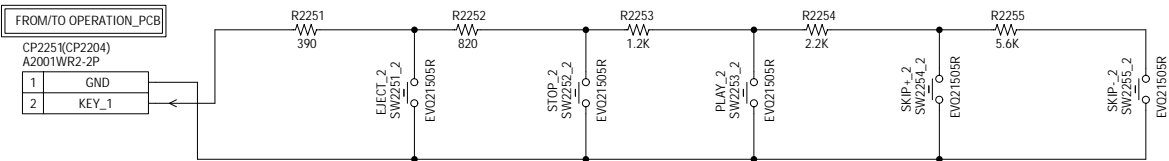


PCB130  
DMF093



OPERATION2 SCHEMATIC DIAGRAM

(OPERATION2 PCB)

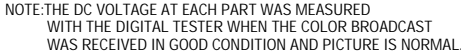


PCB280  
DEF132

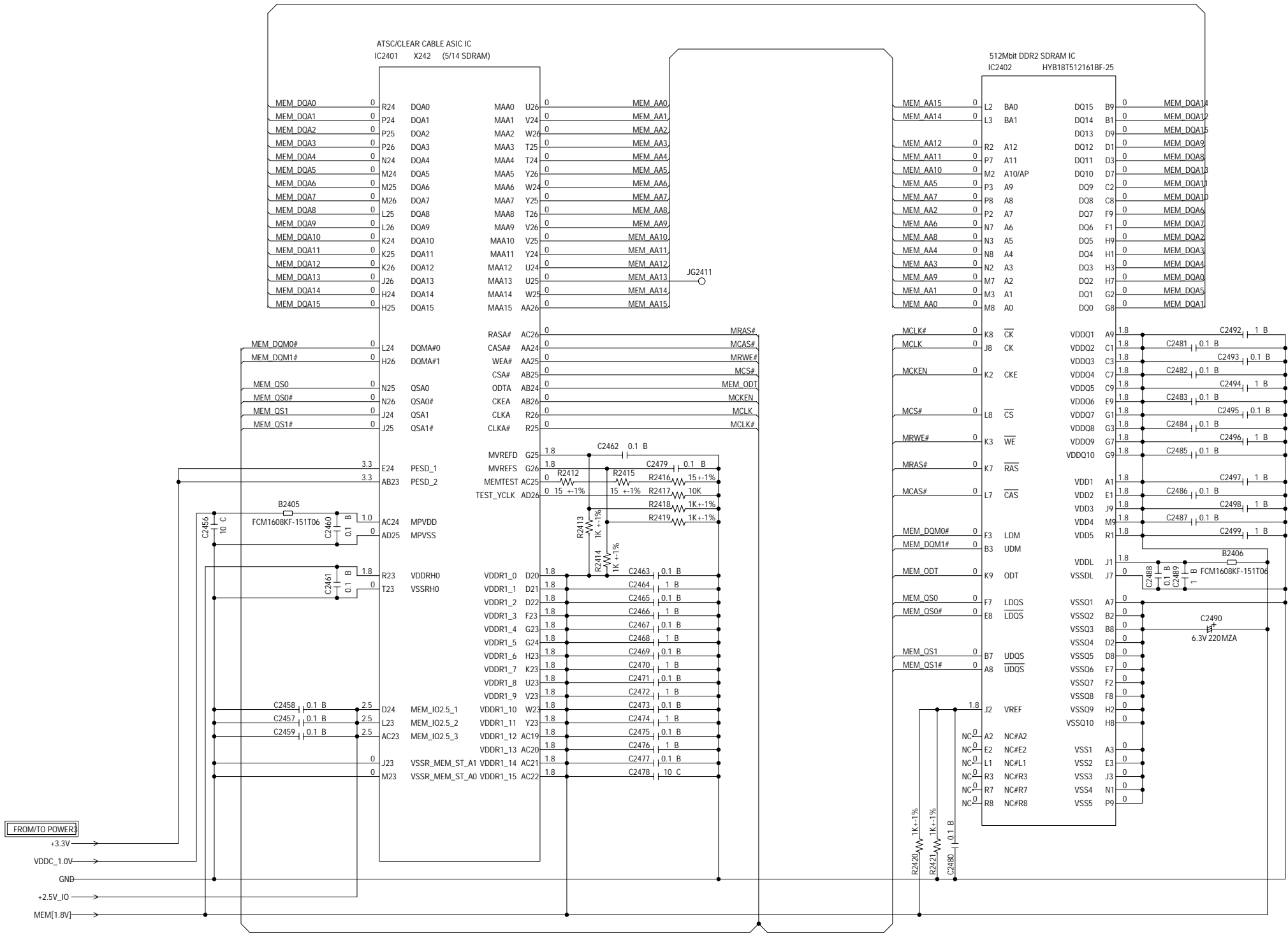
NOTE:THE DC VOLTAGE EACH PART WAS  
MEASURED WITH THE DIGITAL TESTER  
DURING PLAYBACK.

NOTE:THIS SCHEMATIC DIAGRAM IS THE LATEST AT THE TIME  
OF PRINTING AND SUBJECT TO CHANGE WITHOUT NOTICE .

(DIGITAL PCB)



SDRAM SCHEMATIC DIAGRAM  
(DIGITAL PCB)



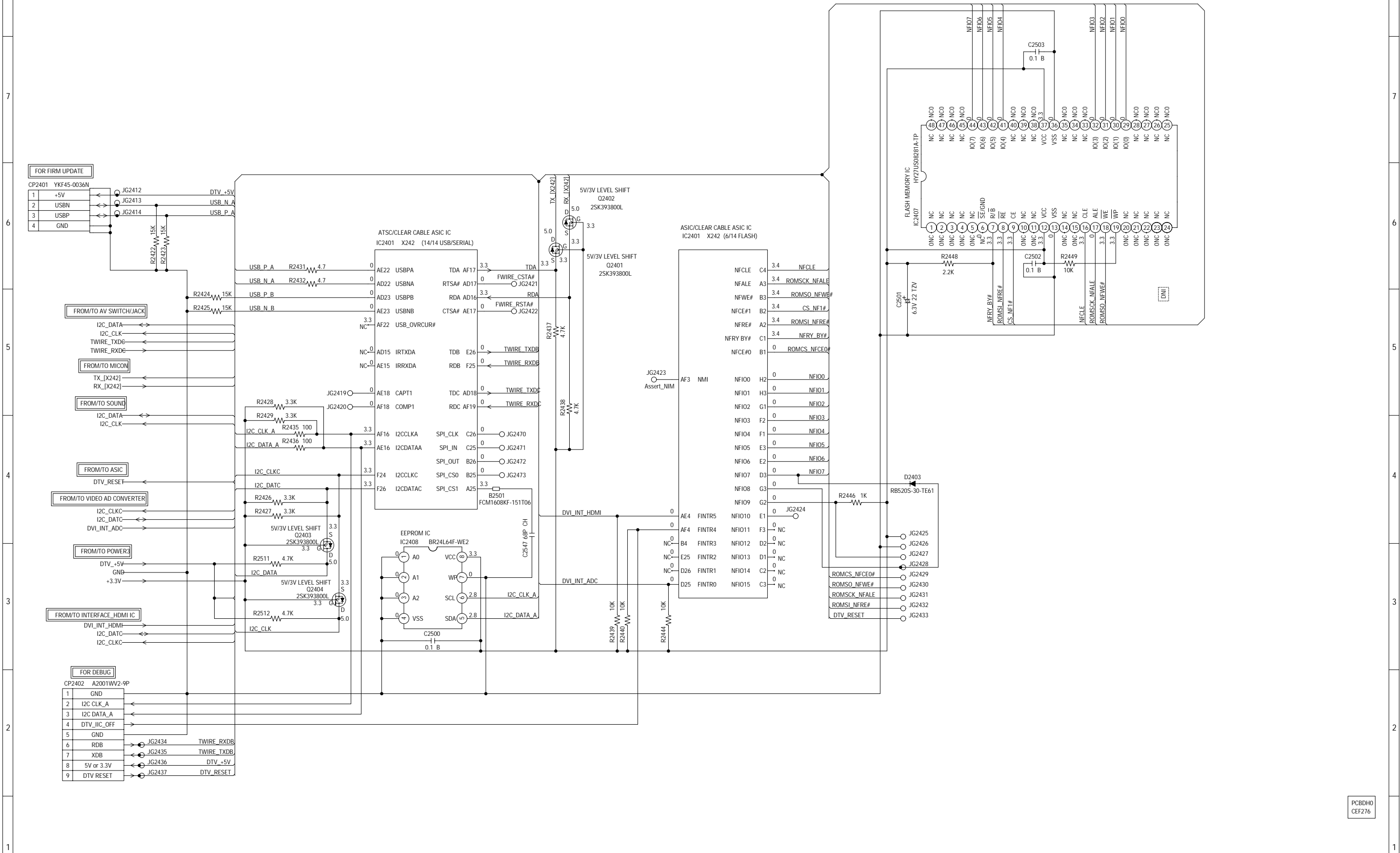
DDR2 PIN Name	4-LAYER CEF272A CEF276A	6-LAYER CEF251A CEF254A
A12	MEM_AA12	MEM_AA12
A11	MEM_AA11	MEM_AA11
A10	MEM_AA10	MEM_AA10
A9	MEM_AA9	MEM_AA9
A8	MEM_AA8	MEM_AA8
A7	MEM_AA7	MEM_AA7
A6	MEM_AA6	MEM_AA6
A5	MEM_AA5	MEM_AA5
A4	MEM_AA4	MEM_AA4
A3	MEM_AA3	MEM_AA3
A2	MEM_AA2	MEM_AA2
A1	MEM_AA1	MEM_AA1
A0	MEM_AA0	MEM_AA0
DQ15	MEM_DQA14	MEM_DQA15
DQ14	MEM_DQA12	MEM_DQA14
DQ13	MEM_DQA15	MEM_DQA9
DQ12	MEM_DQA9	MEM_DQA10
DQ11	MEM_DQA8	MEM_DQA8
DQ10	MEM_DQA13	MEM_DQA12
DQ9	MEM_DQA11	MEM_DQA11
DQ8	MEM_DQA10	MEM_DQA13
DQ7	MEM_DQA6	MEM_DQA7
DQ6	MEM_DQA7	MEM_DQA6
DQ5	MEM_DQA3	MEM_DQA3
DQ4	MEM_DQA2	MEM_DQA2
DQ3	MEM_DQA4	MEM_DQA4
DQ2	MEM_DQA0	MEM_DQA1
DQ1	MEM_DQA5	MEM_DQA5
DQ0	MEM_DQA1	MEM_DQA0

NOTE: THIS SCHEMATIC DIAGRAM IS THE LATEST AT THE TIME  
OF PRINTING AND SUBJECT TO CHANGE WITHOUT NOTICE.

NOTE: THE DC VOLTAGE AT EACH PART WAS MEASURED  
WITH THE DIGITAL TESTER WHEN THE COLOR BROADCAST  
WAS RECEIVED IN GOOD CONDITION AND PICTURE IS NORMAL.

PCBDH0  
CEF276

FLASH SCHEMATIC DIAGRAM  
(DIGITAL PCB)

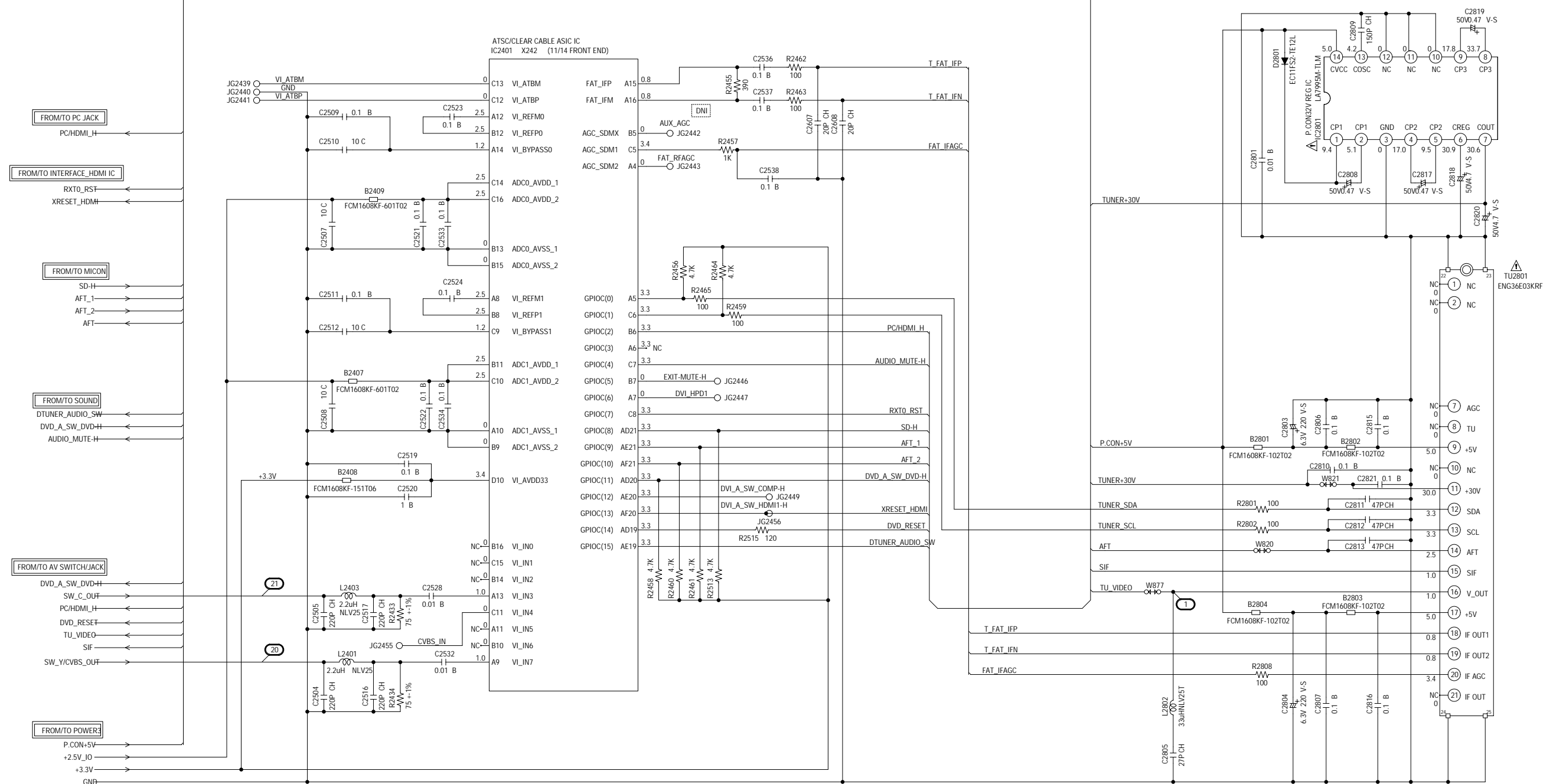


NOTE: THIS SCHEMATIC DIAGRAM IS THE LATEST AT THE TIME  
OF PRINTING AND SUBJECT TO CHANGE WITHOUT NOTICE.

NOTE: THE DC VOLTAGE AT EACH PART WAS MEASURED  
WITH THE DIGITAL TESTER WHEN THE COLOR BROADCAST  
WAS RECEIVED IN GOOD CONDITION AND PICTURE IS NORMAL.

PCBDH0  
CEF276


## FRONT END SCHEMATIC DIAGRAM (DIGITAL PCB)



NOTE: THIS SCHEMATIC DIAGRAM IS THE LATEST AT THE TIME OF PRINTING AND SUBJECT TO CHANGE WITHOUT NOTICE.

NOTE: THE DC VOLTAGE AT EACH PART WAS MEASURED WITH THE DIGITAL TESTER WHEN THE COLOR BROADCAST WAS RECEIVED IN GOOD CONDITION AND PICTURE IS NORMAL.

**CAUTION** SINCE THESE PARTS MARKED BY  ARE CRITICAL FOR SAFETY, USE ONES DESCRIBED IN PARTS LIST ONLY.

**ATTENTION:** LES PIÈCES RÉPARÉES PAR UN  ÉTANT DANGEREUSES AU POINT DE VUE SÉCURITÉ N'UTILISER QUE CELLES DÉCRITES DANS LA NOMENCLATURE DES PIÈCES.

AV OUT SCHEMATIC DIAGRAM  
(DIGITAL PCB)

NOTE: THIS SCHEMATIC DIAGRAM IS THE LATEST AT THE TIME OF PRINTING AND SUBJECT TO CHANGE WITHOUT NOTICE.

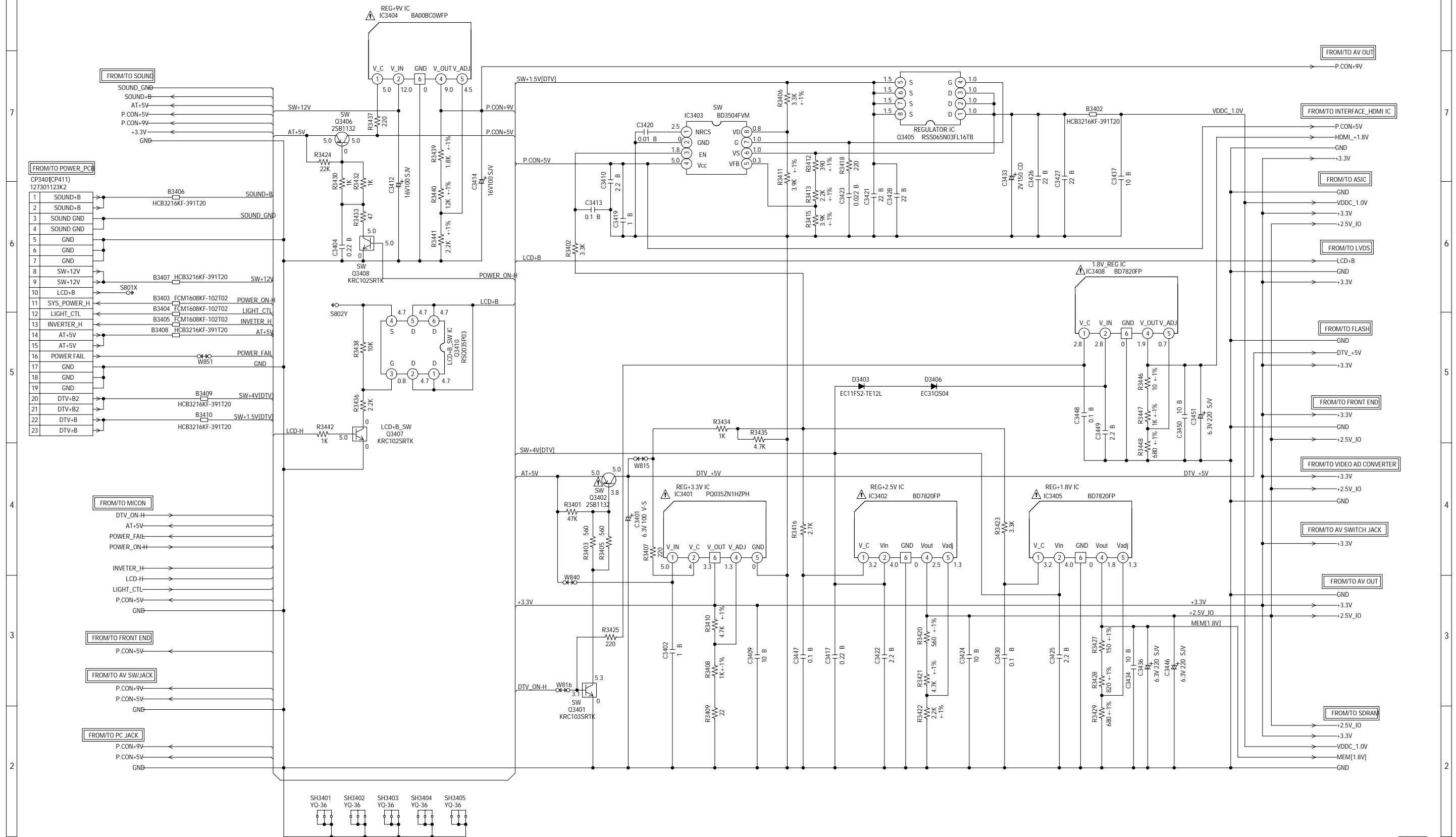
NOTE: THE DC VOLTAGE AT EACH PART WAS MEASURED WITH THE DIGITAL TESTER WHEN THE COLOR BROADCAST WAS RECEIVED IN GOOD CONDITION AND PICTURE IS NORMAL.

PCBDH0  
CEF276

NOTE: THE DC VOLTAGE AT EACH PART WAS MEASURED WITH THE DIGITAL TESTER WHEN THE COLOR BROADCAST WAS RECEIVED IN GOOD CONDITION AND PICTURE IS NORMAL.

PCBDH0  
CEF276

POWER3 SCHEMATIC DIAGRAM  
(DIGITAL PCB)



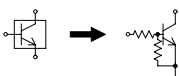
NOTE: THIS SCHEMATIC DIAGRAM IS THE LATEST AT THE TIME OF PRINTING AND SUBJECT TO CHANGE WITHOUT NOTICE.

NOTE: THE DC VOLTAGE AT EACH PART WAS MEASURED WITH THE DIGITAL TESTER WHEN THE COLOR BROADCAST WAS RECEIVED IN GOOD CONDITION AND PICTURE IS NORMAL.

CAUTION: SINCE THESE PARTS MARKED BY ARE CRITICAL FOR SAFETY, USE ONES DESCRIBED IN PARTS LIST ONLY.

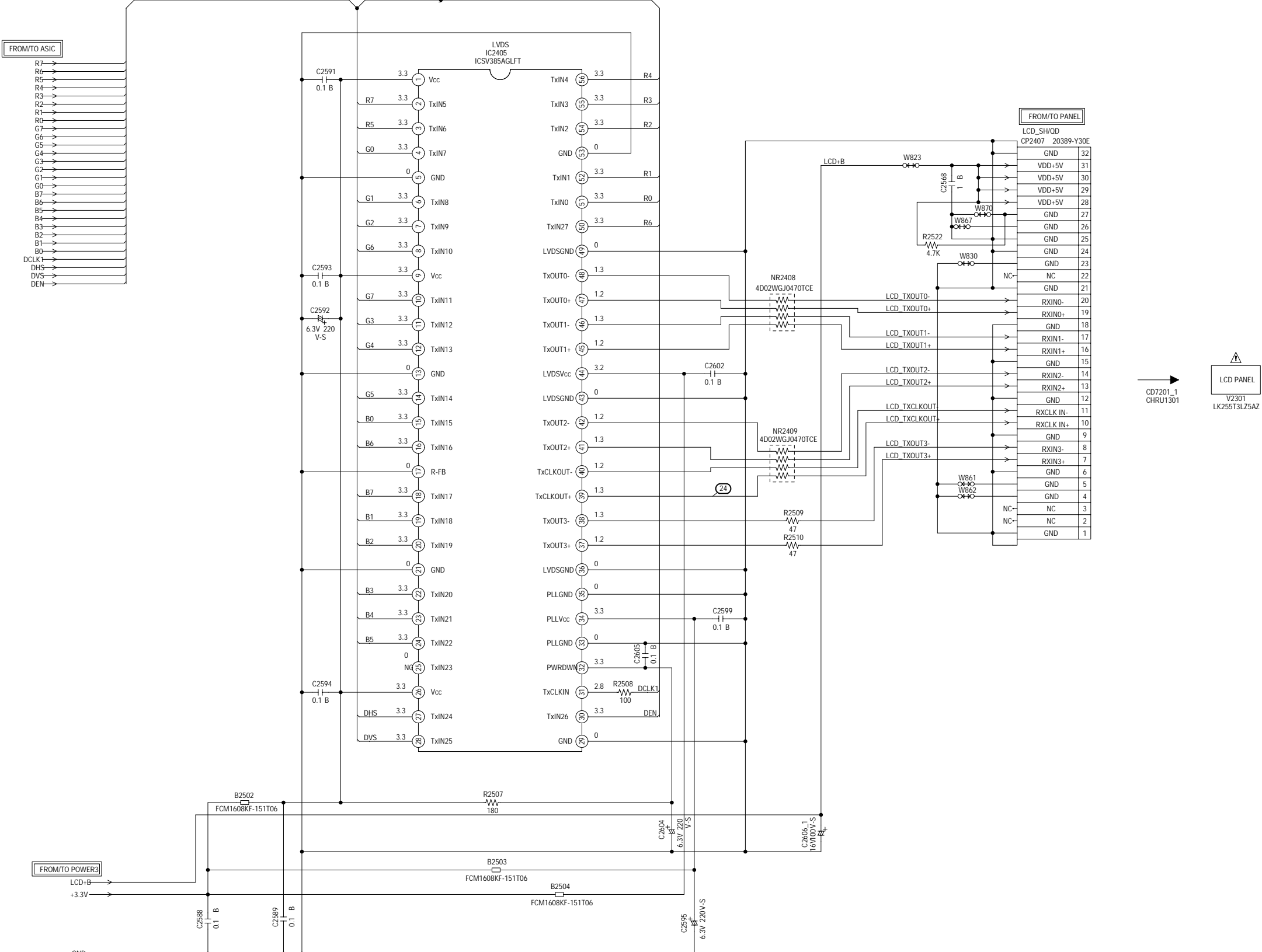
ATTENTION: LES PIECES REPARÉES PAR UN ÉTANT DANGEREUSES AU POINT DE VUE SÉCURITÉ, N'UTILISER QUE CELLES DÉCRITES DANS LA NOMENCLATURE DES PIÈCES.

CAUTION: DIGITAL TRANSISTOR



PCBDH0  
CEF276


## LVDS SCHEMATIC DIAGRAM (DIGITAL PCB)



NOTE: THIS SCHEMATIC DIAGRAM IS THE LATEST AT THE TIME OF PRINTING AND SUBJECT TO CHANGE WITHOUT NOTICE

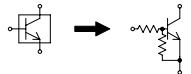
NOTE: THE DC VOLTAGE AT EACH PART WAS MEASURED WITH THE DIGITAL TESTER WHEN THE COLOR BROADCAST WAS RECEIVED IN GOOD CONDITION AND PICTURE IS NORMAL.

**CAUTION** SINCE THESE PARTS MARKED BY  ARE CRITICAL FOR SAFETY, USE ONES DESCRIBED IN PARTS LIST ONLY

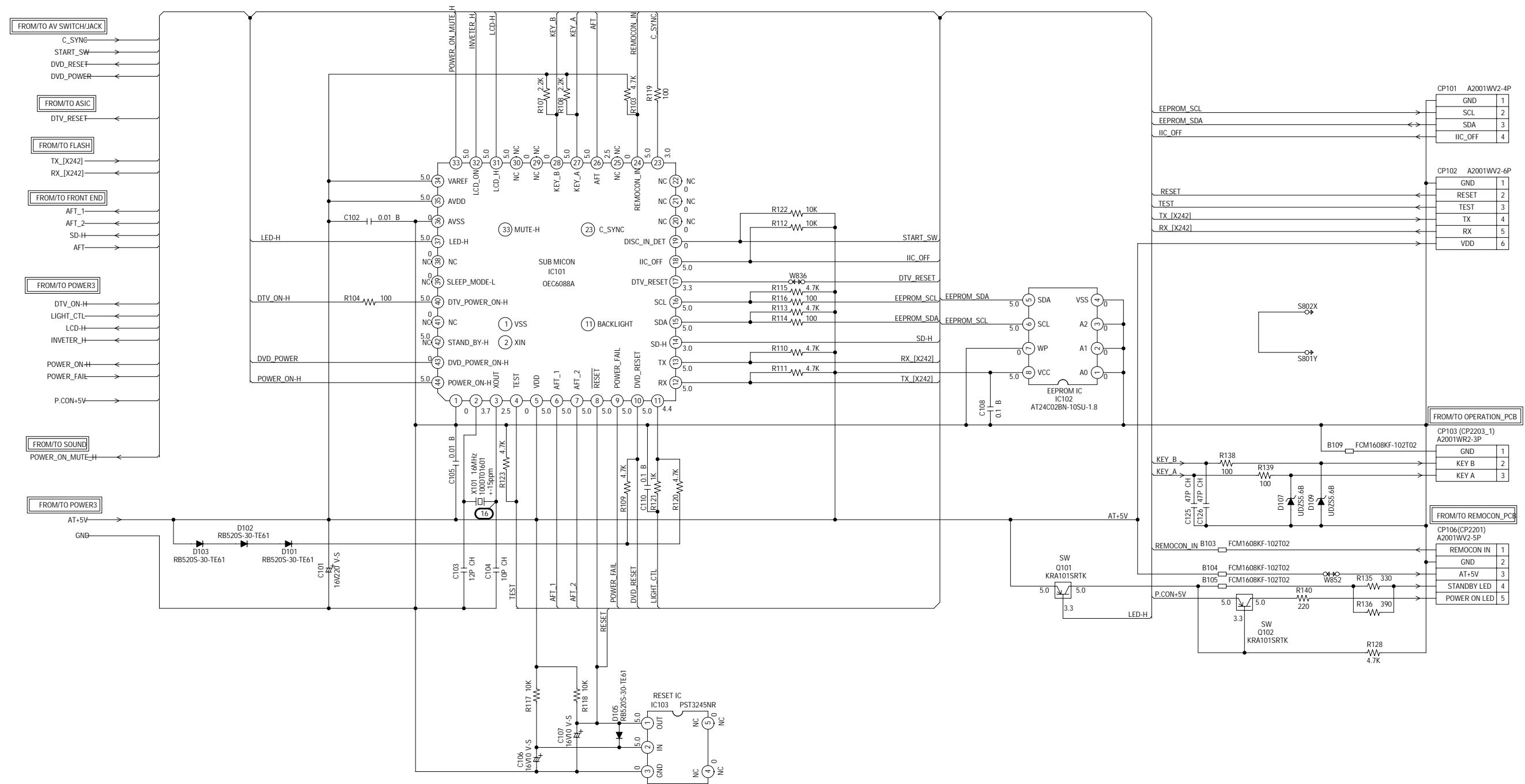
**ATTENTION:** LES PIÈCES RÉPARÉES PAR UN  ÉTANT DANGEREUSES AU POINT DE VUE SÉCURITÉ, N'UTILISER QUE CELLES DÉCRITES DANS LA NOMENCLATURE DES PIÈCES.



(DIGITAL PCB)



MICON SCHEMATIC DIAGRAM  
(DIGITAL PCB)



NOTE: THIS SCHEMATIC DIAGRAM IS THE LATEST AT THE TIME  
OF PRINTING AND SUBJECT TO CHANGE WITHOUT NOTICE.

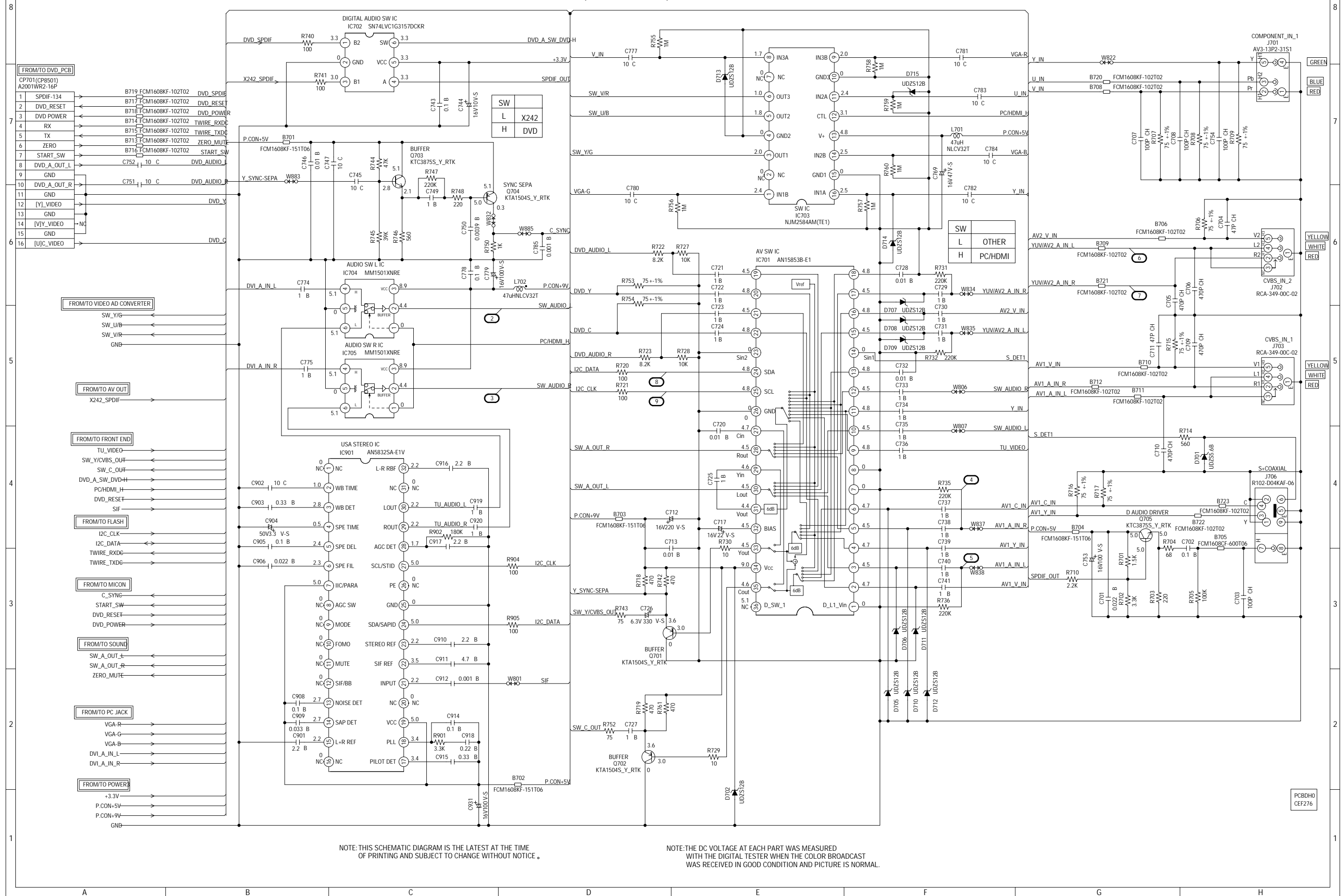
NOTE: THE DC VOLTAGE AT EACH PART WAS MEASURED  
WITH THE DIGITAL TESTER WHEN THE COLOR BROADCAST  
WAS RECEIVED IN GOOD CONDITION AND PICTURE IS NORMAL.

CAUTION: DIGITAL TRANSISTOR

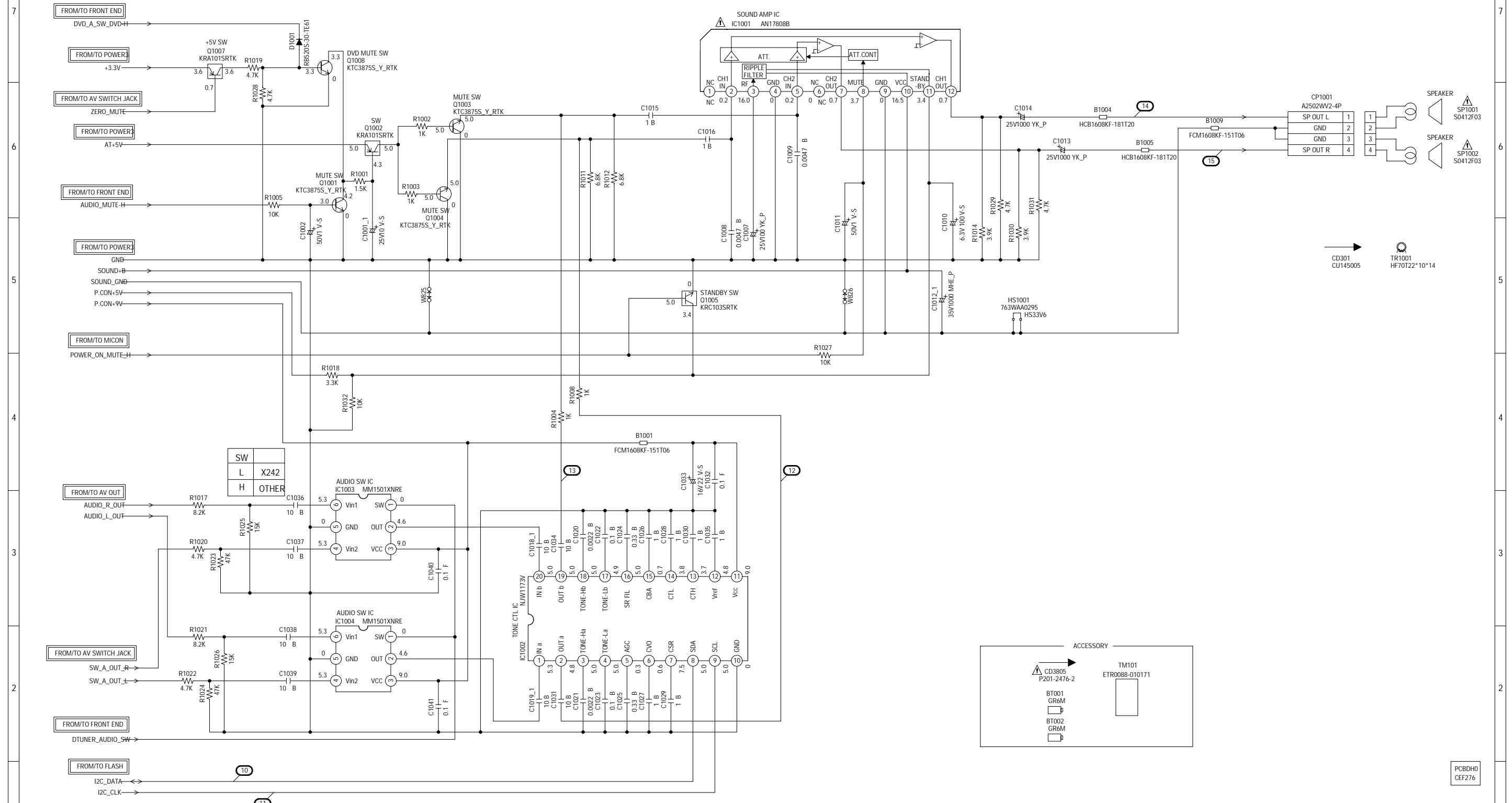


PCBDH0  
CEF276

# AV SWITCH/JACK SCHEMATIC DIAGRAM (DIGITAL PCB)



SOUND SCHEMATIC DIAGRAM  
(DIGITAL PCB)



NOTE: THIS SCHEMATIC DIAGRAM IS THE LATEST AT THE TIME OF PRINTING AND SUBJECT TO CHANGE WITHOUT NOTICE.

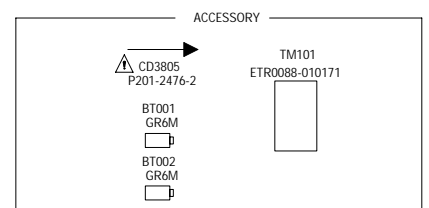
NOTE: THE DC VOLTAGE AT EACH PART WAS MEASURED WITH THE DIGITAL TESTER WHEN THE COLOR BROADCAST WAS RECEIVED IN GOOD CONDITION AND PICTURE IS NORMAL.

CAUTION: SINCE THESE PARTS MARKED BY ARE CRITICAL FOR SAFETY, USE ONES DESCRIBED IN PARTS LIST ONLY.

ATTENTION: LES PIECES REPAREES PAR UN ETANT DANGEREUSES AN POINT DE VUE SECURITE N'UTILISER QUE CELLS DECRITES DANS LA NOMENCLATURE DES PIECES.

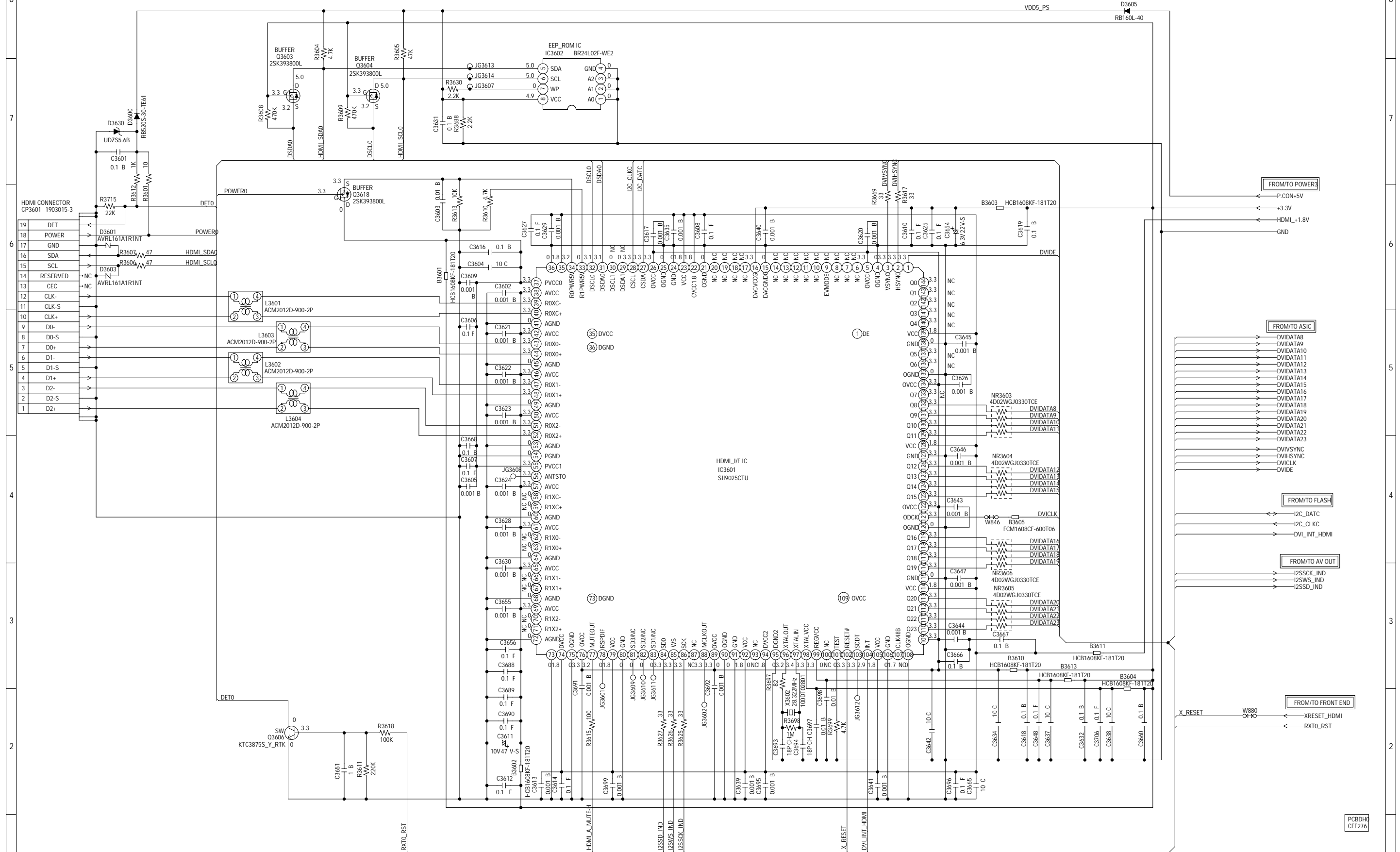
CAUTION: DIGITAL TRANSISTOR

CAUTION: DIGITAL TRANSISTOR



PCBDH0  
CEF276

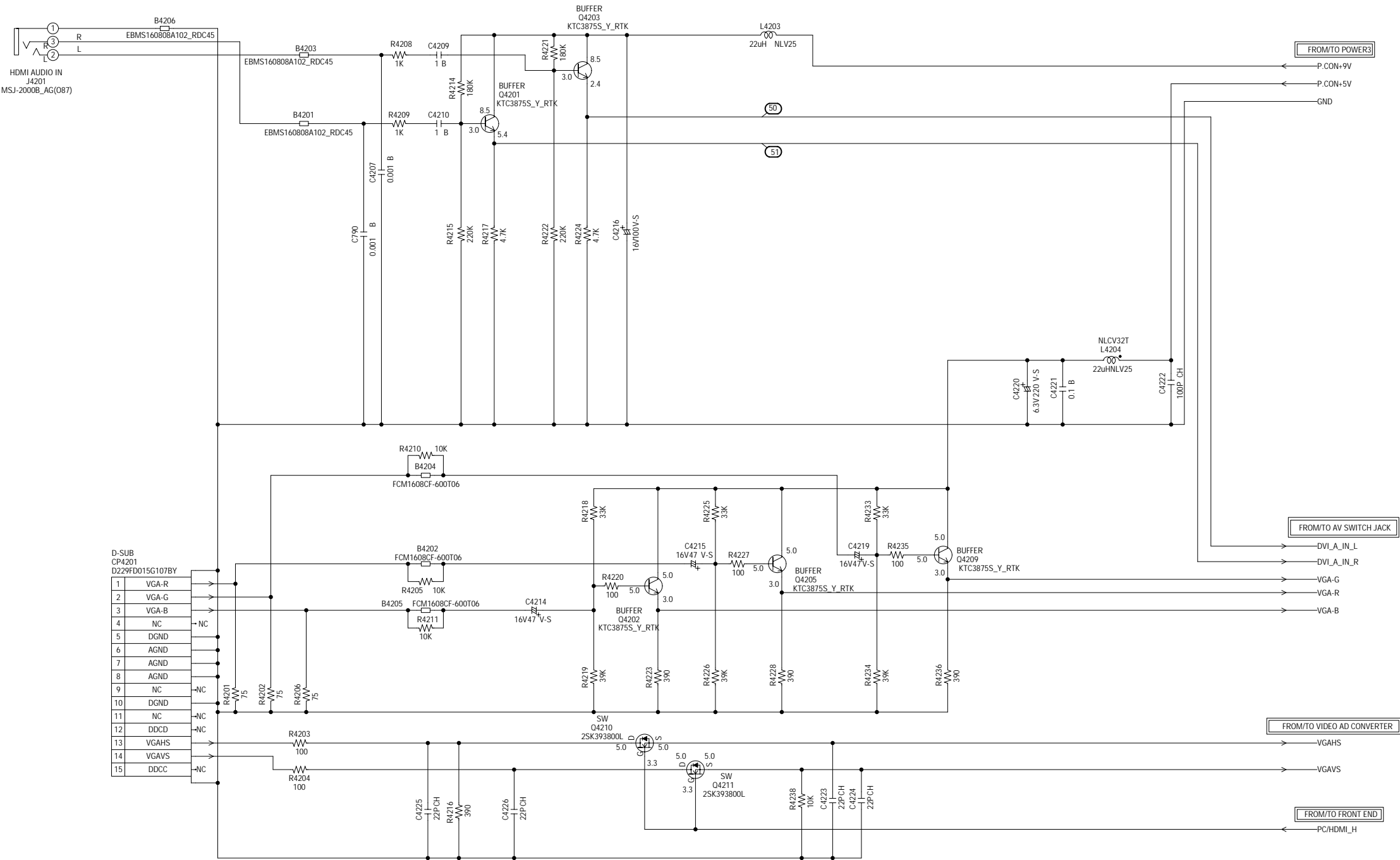
## INTERFACE\_HDMI IC SCHEMATIC DIAGRAM (DIGITAL PCB)



NOTE: THIS SCHEMATIC DIAGRAM IS THE LATEST AT THE TIME OF PRINTING AND SUBJECT TO CHANGE WITHOUT NOTICE.

NOTE: THE DC VOLTAGE AT EACH PART WAS MEASURED WITH THE DIGITAL TESTER WHEN THE COLOR BROADCAST WAS RECEIVED IN GOOD CONDITION AND PICTURE IS NORMAL.

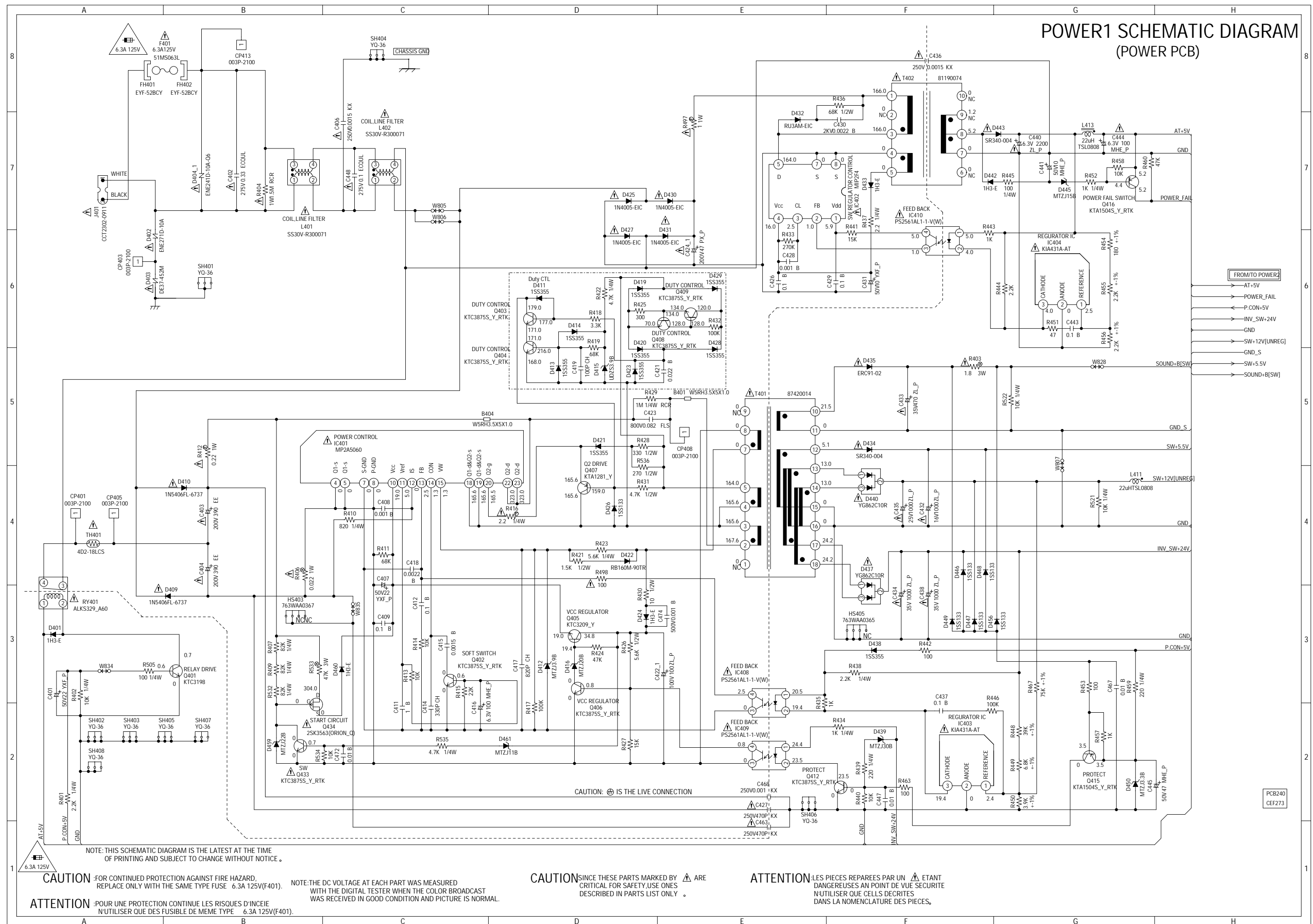
PC JACK SCHEMATIC DIAGRAM  
(DIGITAL PCB)





NOTE:THE DC VOLTAGE AT EACH PART WAS MEASURED  
WITH THE DIGITAL TESTER WHEN THE COLOR BROADCAST  
WAS RECEIVED IN GOOD CONDITION AND PICTURE IS NORMAL.

NOTE:THIS SCHEMATIC DIAGRAM IS THE LATEST AT THE TIME  
OF PRINTING AND SUBJECT TO CHANGE WITHOUT NOTICE.

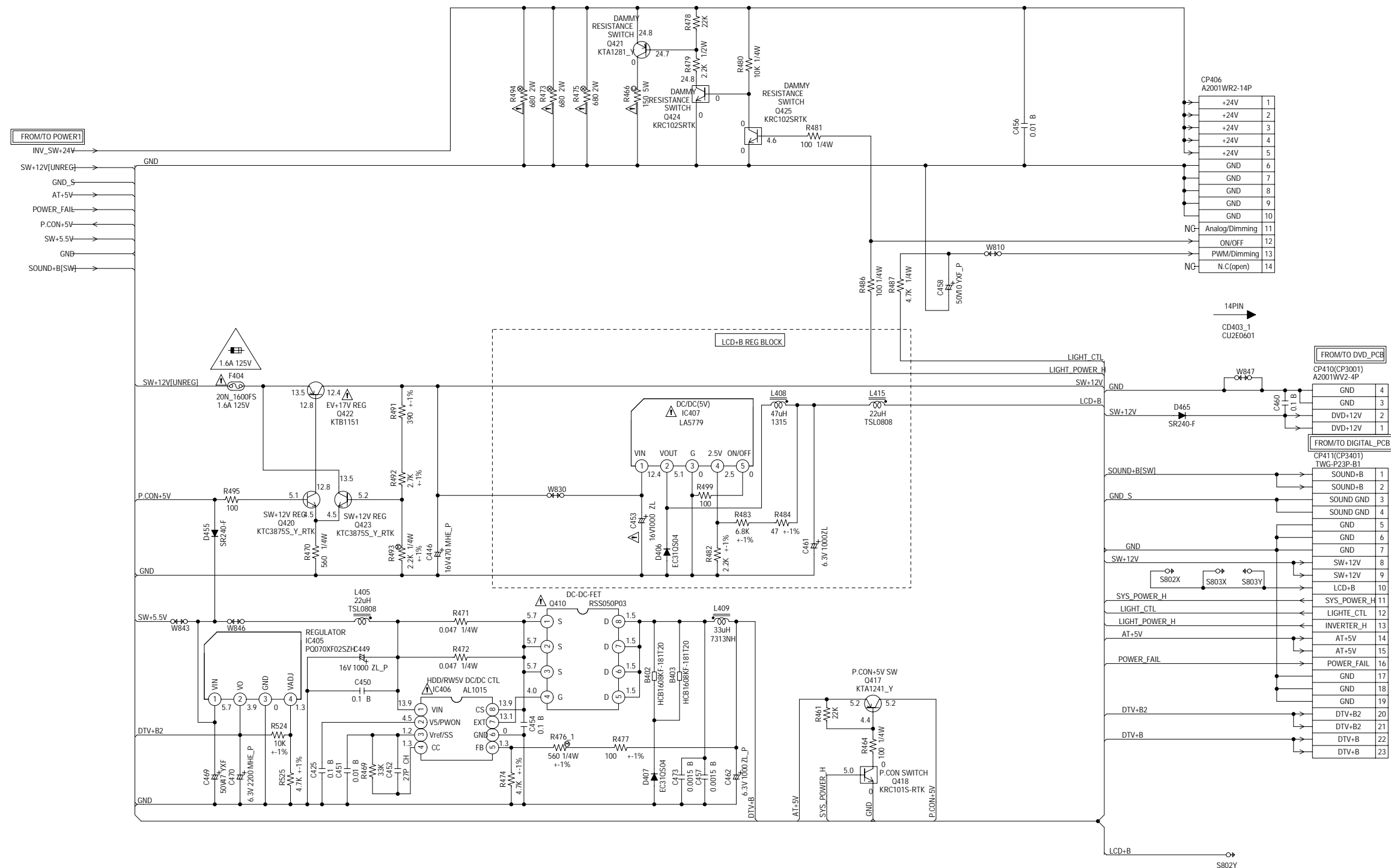
PCBDH0  
CEF276

POWER1 SCHEMATIC DIAGRAM  
(POWER PCB)

**CAUTION** SINCE THESE PARTS MARKED BY  ARE CRITICAL FOR SAFETY, USE ONES DESCRIBED IN PARTS LIST ONLY.

**ATTENTION:** LES PIÈCES RÉPARÉES PAR UN  ÉTANT DANGEREUSES AU POINT DE VUE SÉCURITÉ N'UTILISER QUE CELLES DÉCRITES DANS LA NOMENCLATURE DES PIÈCES.

## POWER2 SCHEMATIC DIAGRAM (POWER PCB)



**CAUTION** :FOR CONTINUED PROTECTION AGAINST FIRE HAZARD,  
REPLACE ONLY WITH THE SAME TYPE FUSE 1.6A 125V(F404).

**ATTENTION** :POUR UNE PROTECTION CONTINUE LES RISQUES D'INCEIE  
N'UTILISER QUE DES FUSIBLE DE MEME TYPE 1.6A 125V(F404).


**CAUTION** :F404 IS MANUFACTURED BY SKYGATE CO.,LTD., TYPE 20N.

NOTE: THIS SCHEMATIC DIAGRAM IS THE LATEST AT THE TIME OF PRINTING AND SUBJECT TO CHANGE WITHOUT NOTICE.

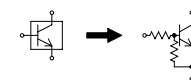
NOTE: THE DC VOLTAGE AT EACH PART WAS MEASURED WITH THE DIGITAL TESTER WHEN THE COLOR BROADCAST WAS RECEIVED IN GOOD CONDITION AND PICTURE IS NORMAL.

CAUTION:  IS THE LIVE CONNECTION

**CAUTION** SINCE THESE PARTS MARKED BY  ARE CRITICAL FOR SAFETY, USE ONES DESCRIBED IN PARTS LIST ONLY.

**ATTENTION:** LES PIÈCES RÉPARÉES PAR UN  ÉTANT DANGEREUSES AU POINT DE VUE SÉCURITÉ N'UTILISER QUE CELLES DÉCRITES DANS LA NOMENCLATURE DES PIÈCES.

CAUTION: DIGITAL TRANSISTOR

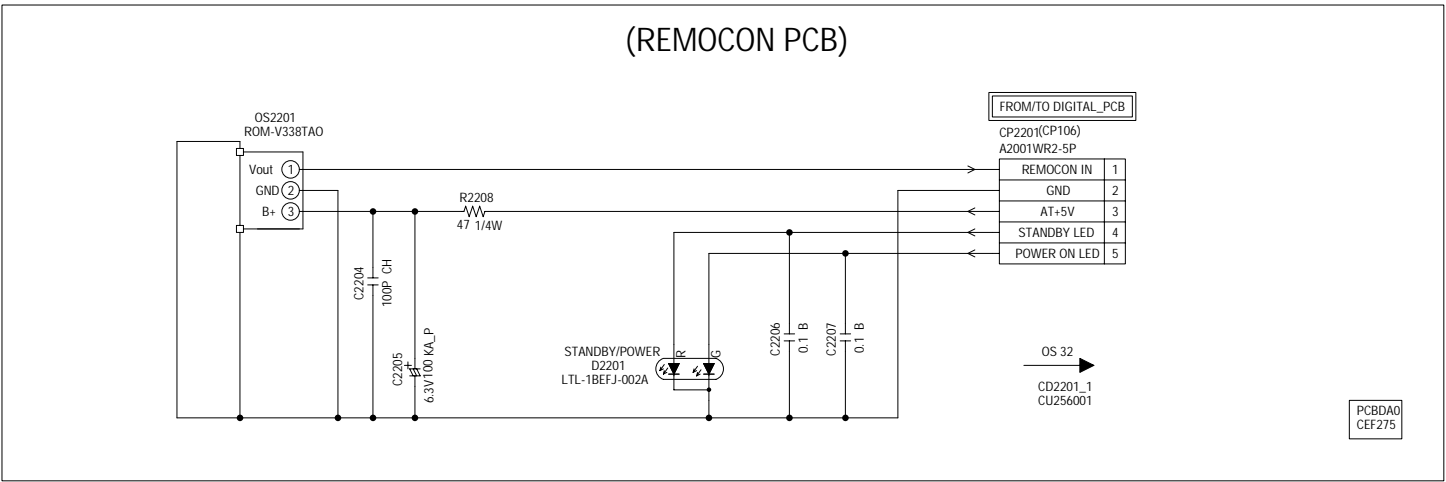


CB240  
EF273

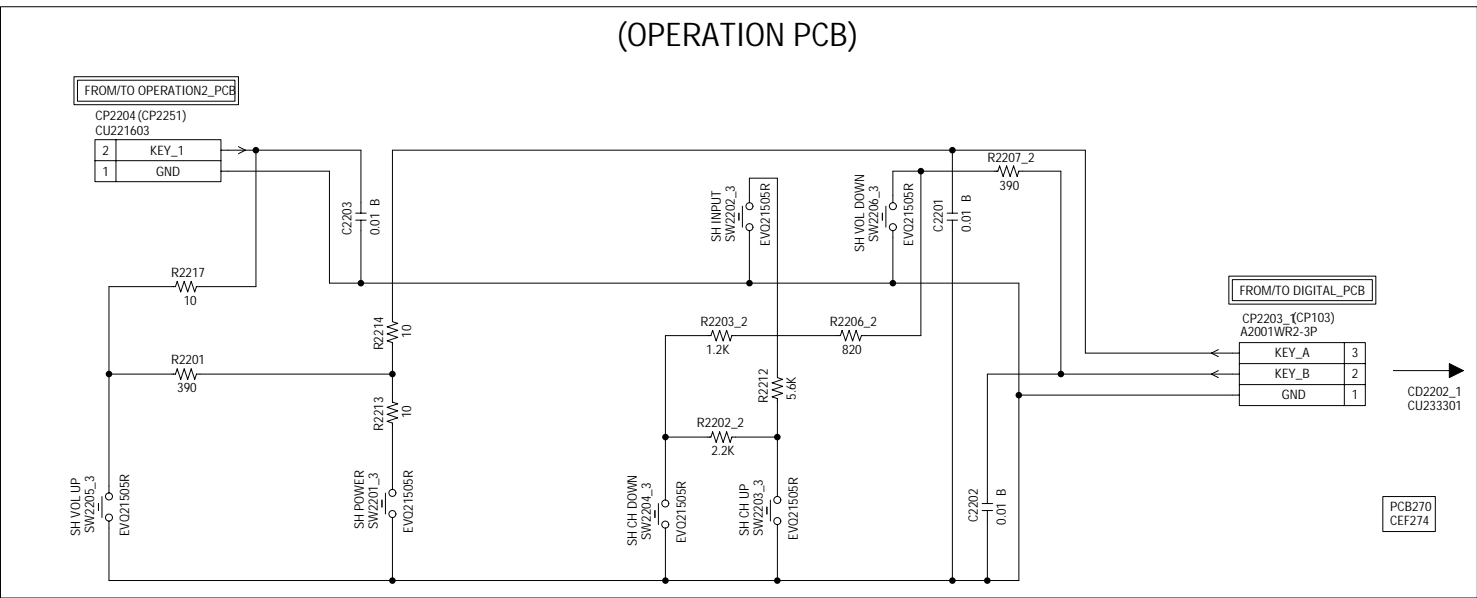


OPERATION/REMOCON SCHEMATIC DIAGRAM

(REMOCON PCB)



(OPERATION PCB)

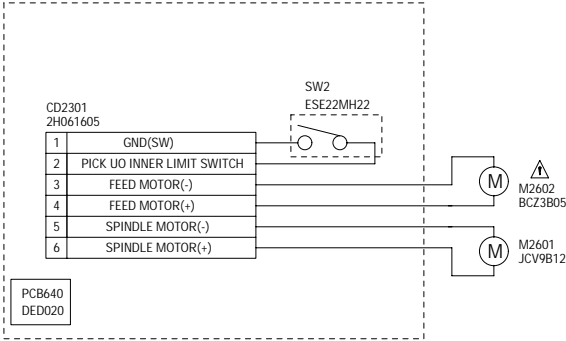



NOTE: THIS SCHEMATIC DIAGRAM IS THE LATEST AT THE TIME OF PRINTING AND SUBJECT TO CHANGE WITHOUT NOTICE .


NOTE: THE DC VOLTAGE AT EACH PART WAS MEASURED WITH THE DIGITAL TESTER WHEN THE COLOR BROADCAST WAS RECEIVED IN GOOD CONDITION AND PICTURE IS NORMAL.

SW SCHEMATIC DIAGRAM

(SW PCB)

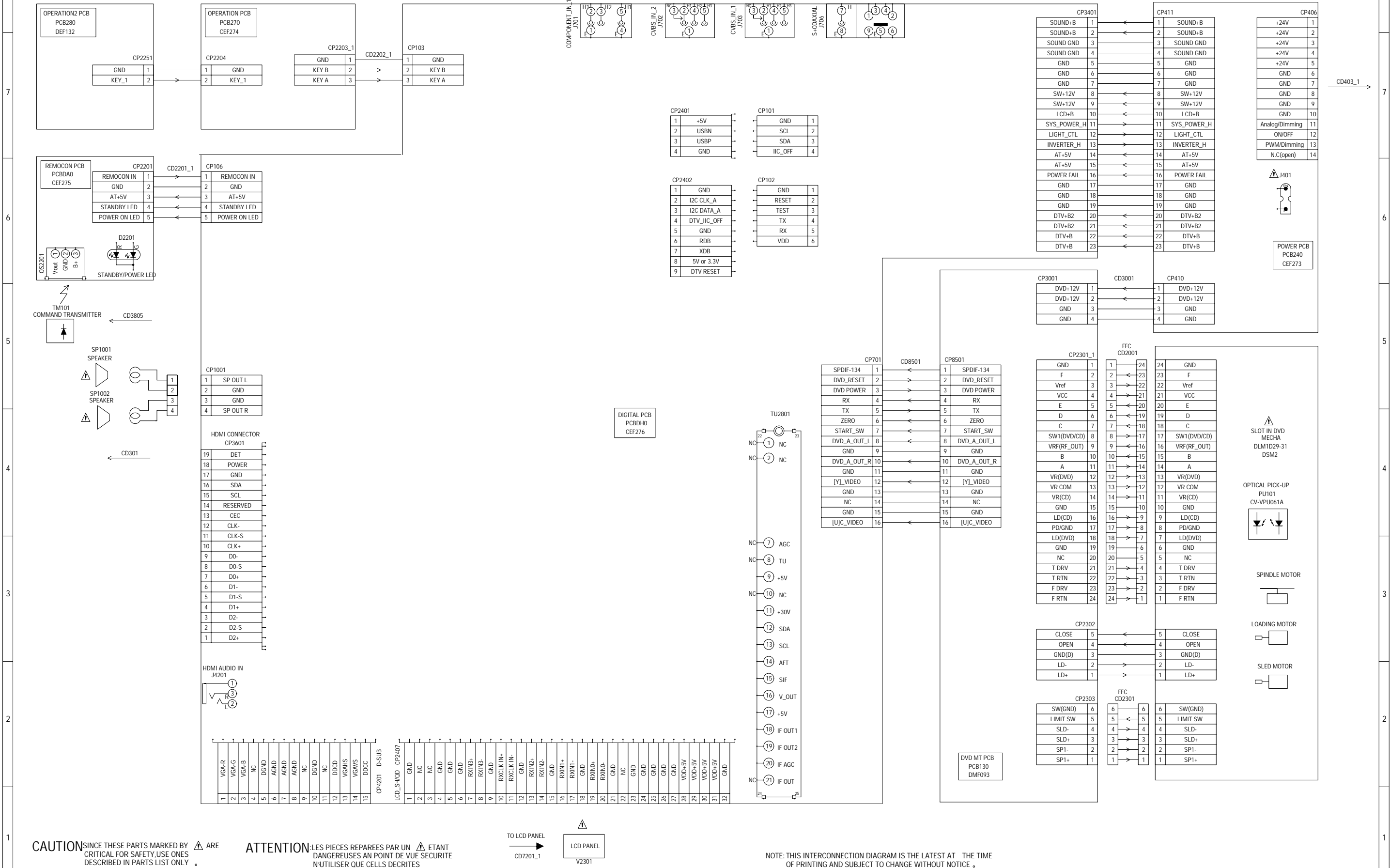


**CAUTION** SINCE THESE PARTS MARKED BY  ARE CRITICAL FOR SAFETY, USE ONES DESCRIBED IN PARTS LIST ONLY

**ATTENTION** LES PIECES REPARÉES PAR UN  ETANT DANGEREUSES AN POINT DE VUE SECURITE N'UTILISER QUE CELLS DECRITES DANS LA NOMENCLATURE DES PIECES

NOTE: THIS SCHEMATIC DIAGRAM IS THE LATEST AT THE TIME OF PRINTING AND SUBJECT TO CHANGE WITHOUT NOTICE .

# INTERCONNECTION DIAGRAM

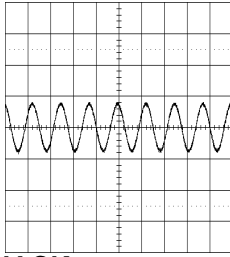


# WAVEFORMS

## FRONT END

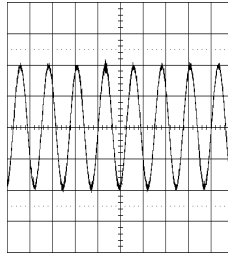
2ms  
0.5V

1



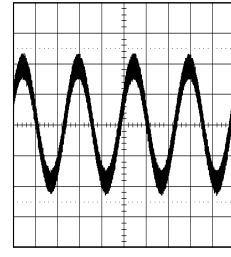
2ms  
200mV

8



1ms  
200mV

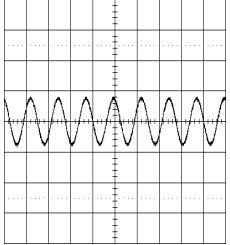
15



## AV SWITCH/JACK

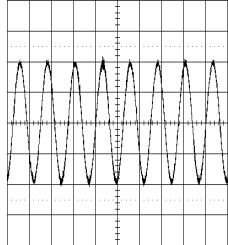
2ms  
0.5V

2



2ms  
200mV

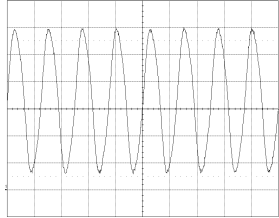
9



## MICON

50ns  
500mV

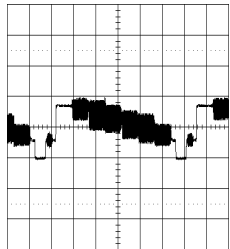
16



## SOUND

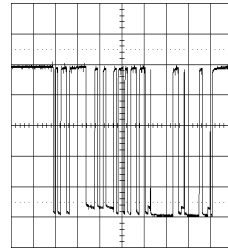
10μs  
0.5V

3



0.5ms  
1.0V

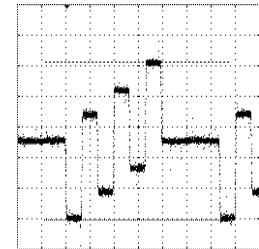
10



## VIDEO AD CONVERTER

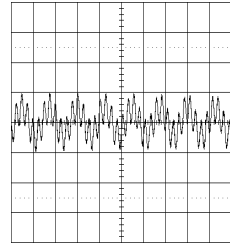
10μs  
100mV

17



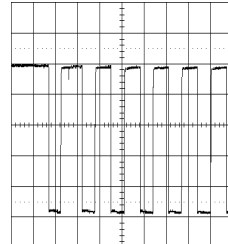
2ms  
0.5V

4



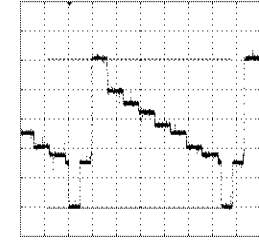
50μs  
1.0V

11



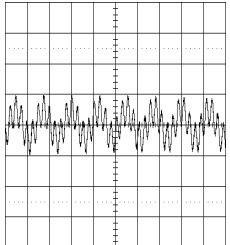
10μs  
200mV

18



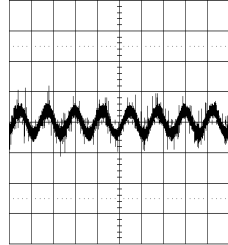
2ms  
0.5V

5



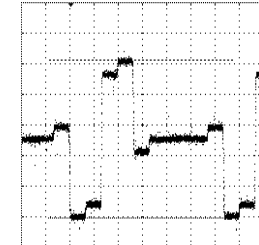
2ms  
50mV

12



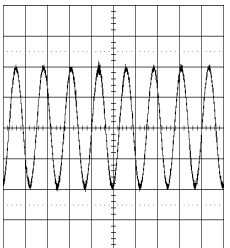
10μs  
100mV

19



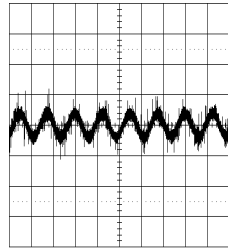
2ms  
200mV

6



2ms  
50mV

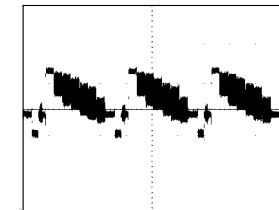
13



## FRONT END

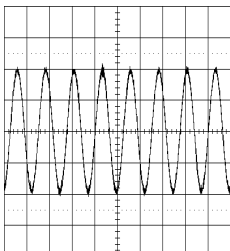
20μs  
500mV

20



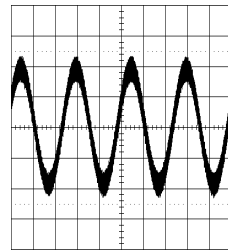
2ms  
200mV

7



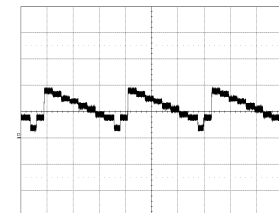
1ms  
200mV

14



20μs  
500mV

21



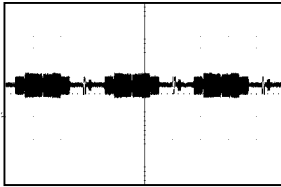
NOTE: The following waveforms were measured at the point of the corresponding balloon number in the schematic diagram

# WAVEFORMS

## ASIC

20µs  
500mV

22



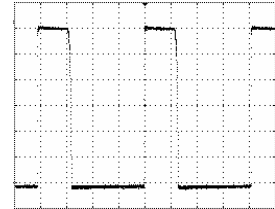
200ns  
1.0V

54



2µs  
2.0V

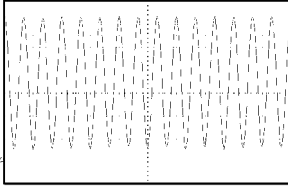
61



## MEMORY

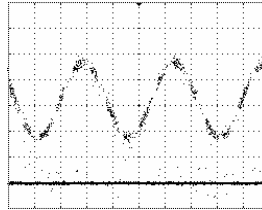
20µs  
500mV

23



100µs  
500mV

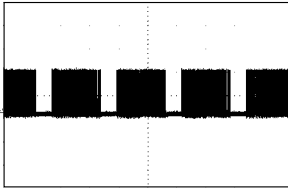
55



## LVDS

10µs  
2.0V

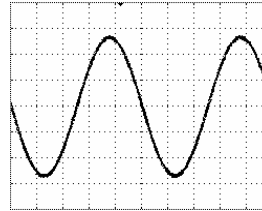
24



## AUDIO/VIDEO

200µs  
1.0V

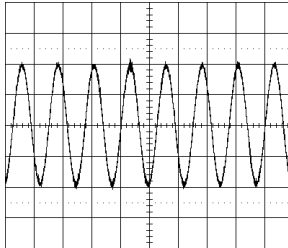
56



## PC/JACK

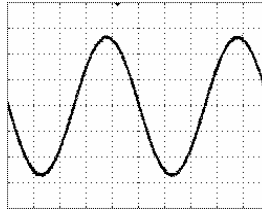
2ms  
200mV

50



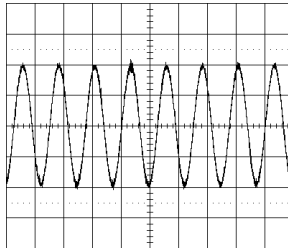
200µs  
1.0V

57



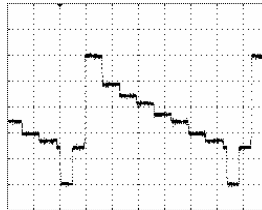
2ms  
200mV

51



10µs  
200mV

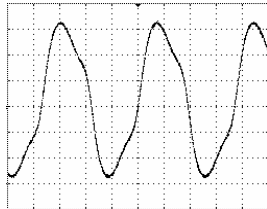
58



## MPEG/MICON/DSP/RF\_AMP

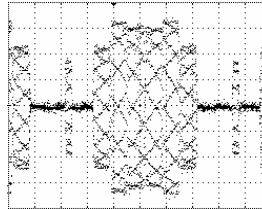
10ns  
500mV

52



10µs  
100mV

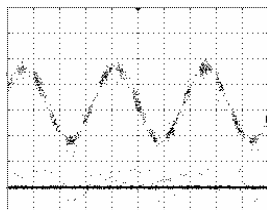
59



## REGULATOR 2

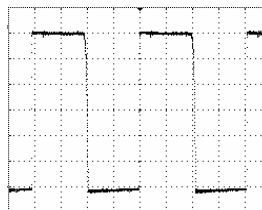
100µs  
500mV

53



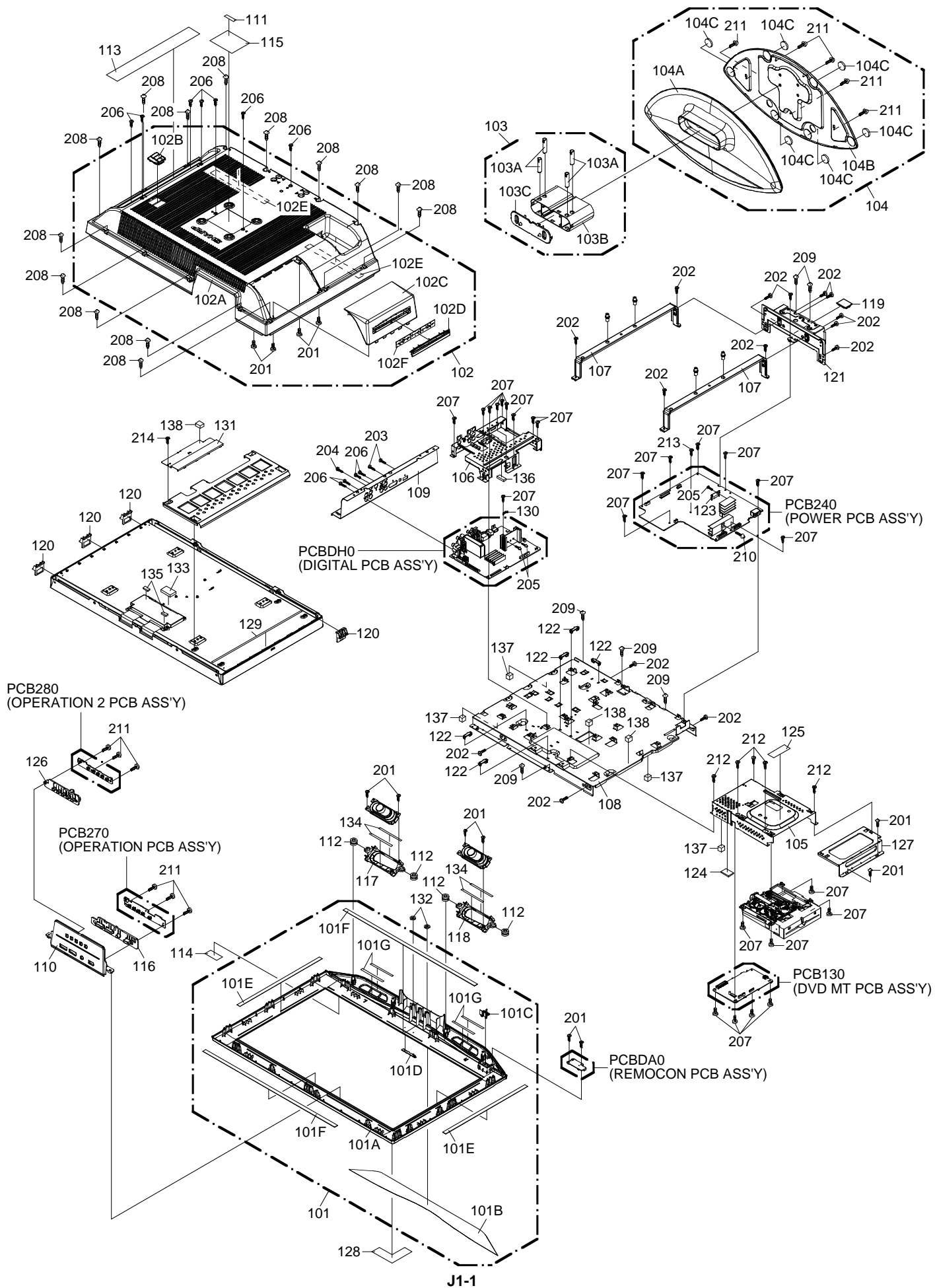
2µs  
2.0V

60

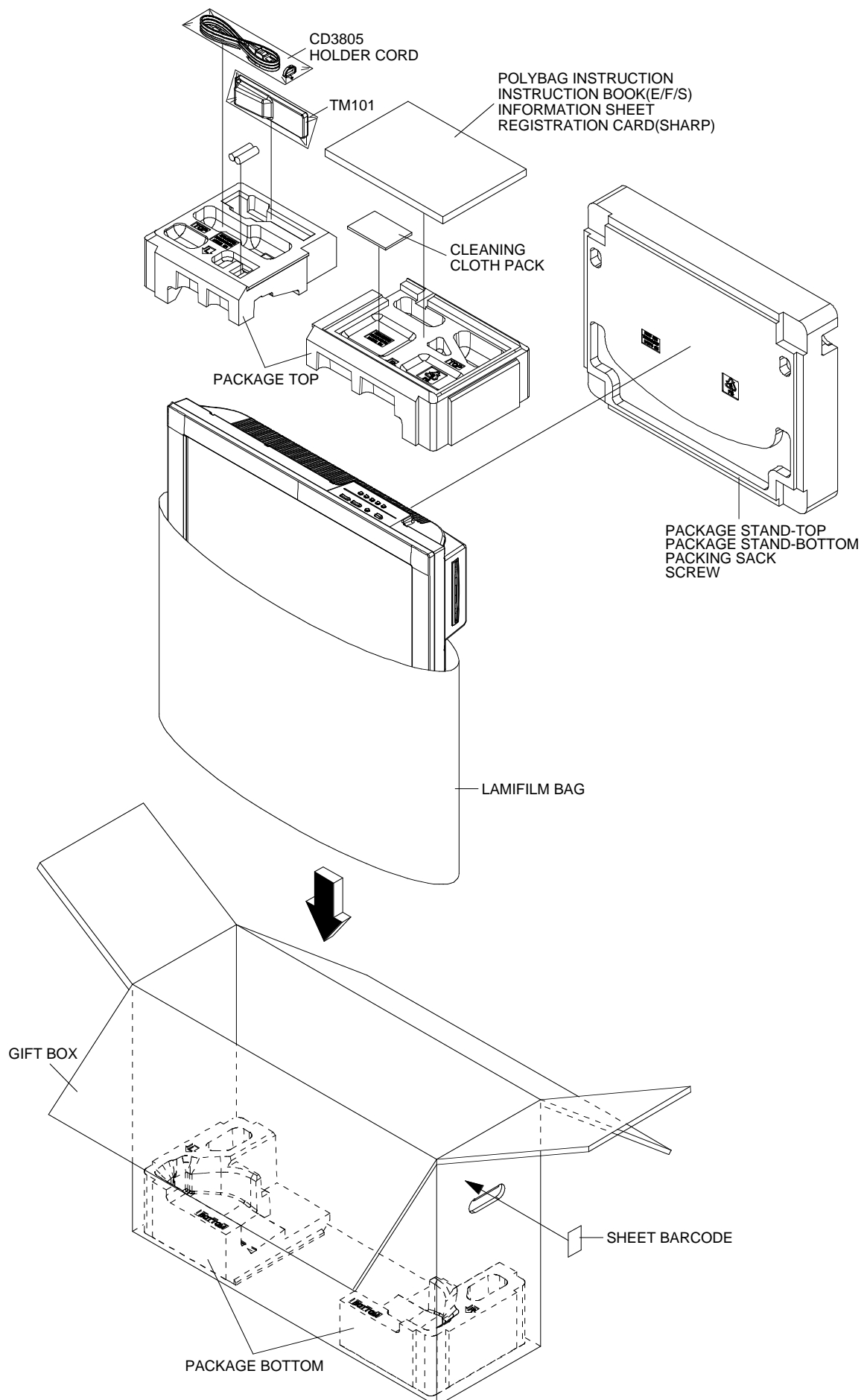


NOTE: The following waveforms were measured at the point of the corresponding balloon number in the schematic diagram.

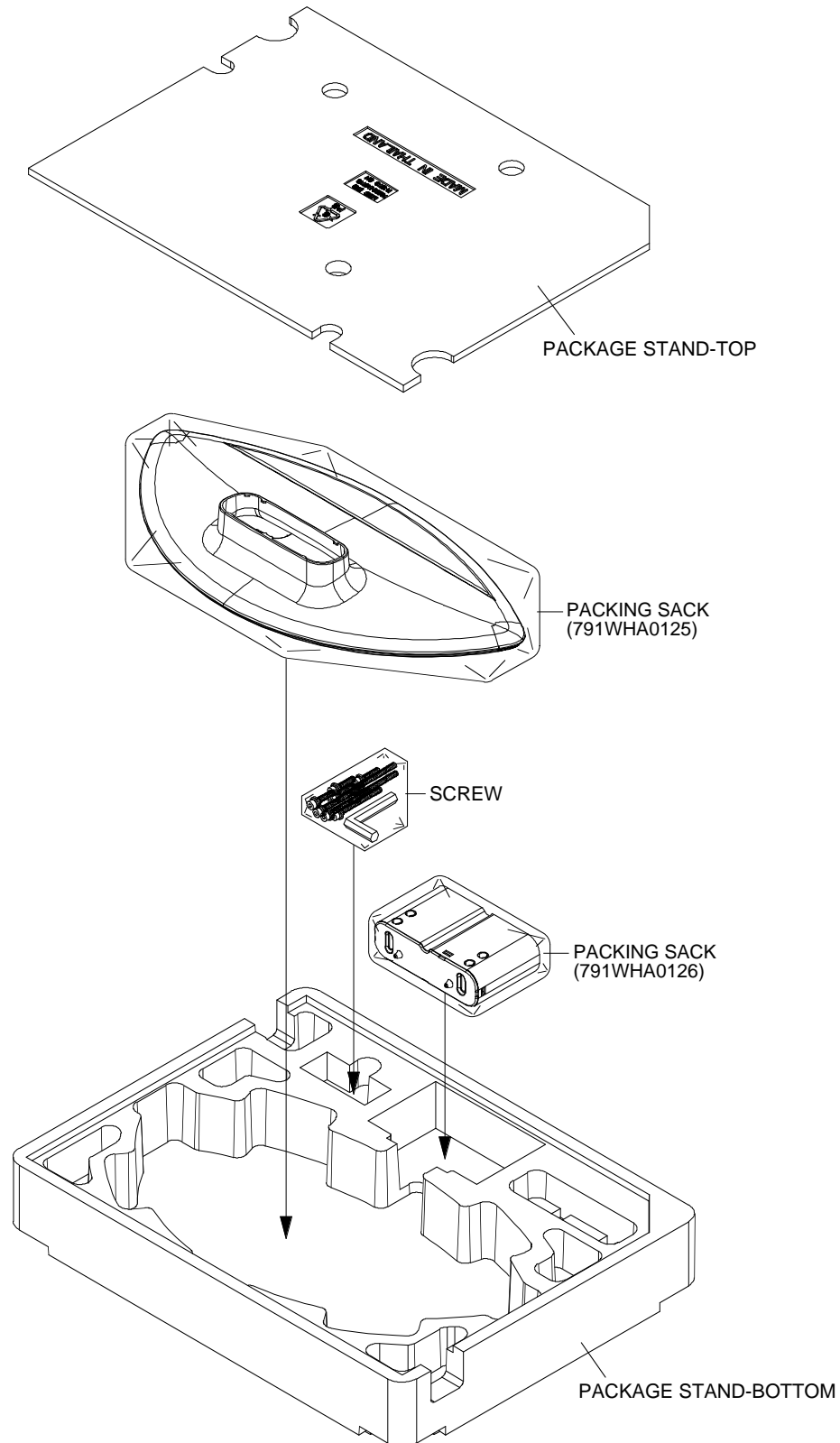
## MECHANICAL EXPLODED VIEW



# MECHANICAL EXPLODED VIEW (PACKING DIAGRAM)

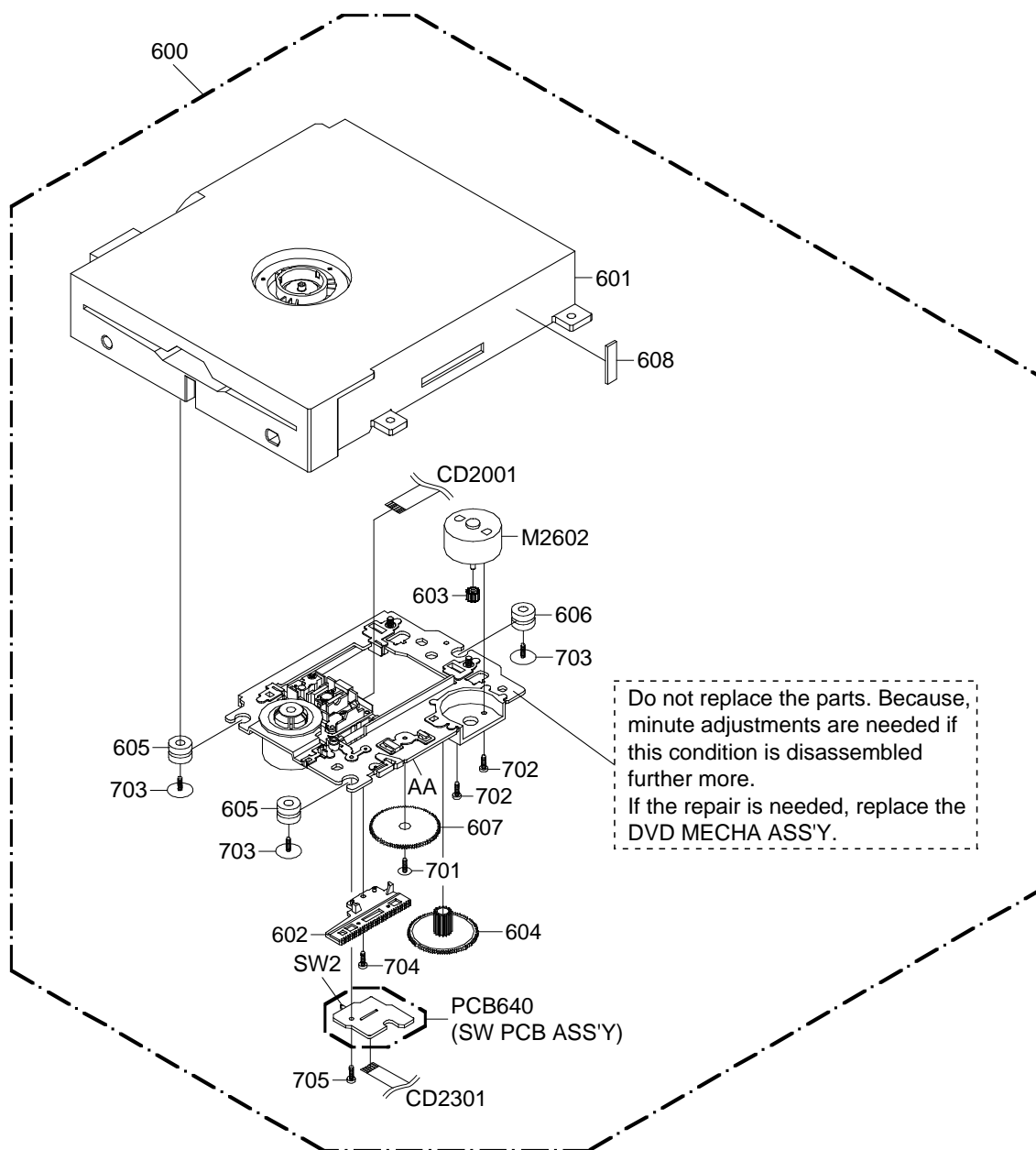


## MECHANICAL EXPLODED VIEW (PACKING DIAGRAM)





## DVD DECK EXPLODED VIEW



CLASS	PART NO.	PART NAME	MARK
GREASE	Y315061000	G-555G	AA

**NOTE:** Applying positions AA for the grease are displayed for this section.  
Check if the correct grease is applied for each position.

# MECHANICAL REPLACEMENT PARTS LIST

REF. NO.	PART NO.	DESCRIPTION	REF. NO.	PART NO.	DESCRIPTION
101	7A701A922A	FRONT CABI ASS'Y	201	8110630A0U	SCREW TAP TITE(P) BRAZIER 3x10
101A	701WPD470	CABINET FRONT	202	810A14080U	SCREW WASHER(A) M4x8
101B	702WNB0005	SHEET SPEAKER	203	810213080S	SCREW PAN M3x8
101C	713WPA0415	GLASS LED	204	810223040S	SCREW BIND M3x4
101D	7235270040	BADGE BRAND	205	810763080U	SCREW TAP TITE(S) BRAZIER 3x8
101E	800WQ00124	FELT SHEET	206	810923080S	SCREW TAP TITE(B) BIND 3x8
101F	800WQ00125	FELT SHEET	207	810923080U	SCREW TAP TITE(B) BIND 3x8
101G	800WQ00127	FELT SHEET	208	8110230B5S	SCREW TAP TITE(P) BIND 3x25
			209	8117540A0U	SCREW TAPPING(B0) TRUSS 4x10
102	7A702A317A	BACK CABI ASS'Y	210	8109130A0U	SCREW TAP TITE(B) WH7 3x10
102A	702WPA1292	CABINET BACK	211	811063080U	SCREW TAP TITE(P) BRAZIER 3x8
102B	706WPA0027	COVER CONNECTOR	212	810923060U	SCREW TAP TITE(B) BIND 3x6
102C	711WPD0721	PANEL SIDE	213	8171130A0U	SCREW TAP TITE(B) WASHER12 3x10
102D	771WPB0088	SLOT DVD	214	810223060U	SCREW BIND M3x6
102E	800WQ0A113	FELT SHEET			
102F	800WQ00105	FELT SHEET			
103	7A7640006A	FRAME STAND ASS'Y	---	723000D538	SHEET BARCODE
103A	704WPA0081	HOLDER STAND	---	774WPA0011	HOLDER CORD
103B	761WEA0035	FRAME STAND	---	791WHA0125	PACKING SACK
103C	761WPA0470	COVER FRAME STAND	---	791WHA0126	PACKING SACK
			---	791WHA0130	LAMIFILM BAG
104	7A7040033A	STAND ASS'Y	---	792WHA0716	PACKAGE STAND TOP
104A	704WPA0078	STAND	---	792WHA0717	PACKAGE STAND BOTTOM
104B	761WSB0054	ANGLE STAND	---	792WHA0718	PACKAGE TOP
104C	800WFA0120	CUSHION LEG	---	792WHA0719	PACKAGE BOTTOM
			---	793WCDD452	GIFT BOX
105	7G7620007B	ANGLE DVD ASS'Y	---	89001122A2	SCREW
106	752WSA0640	SHIELD DIGITAL	---	890CCOR001	CLEANING CLOTH PACK
107	761WSA0480	ANGLE MAIN	---	J31B0129A	INFORMATION SHEET
108	761WSA0485	COVER LCD	---	J3Y00417A	REGISTRATION CARD(SHARP)
109	761WSB0055	PLATE JACK	---	J5Z20331A	INSTRUCTION BOOK(E/F/S)
			---	JB5ND200	POLYBAG INSTRUCTION(RED CAUTION)
110	711WPD0730	PLATE BUTTON			
111	722000A579	SHEET SERIAL			
112	800WR00084	DAMPER SPEAKER			
113	7230008289	SHEET JACK			
114	7230008322	POP LABEL			
115	723527A060	SHEET RATING			
116	735WPB0360	BUTTON FRAME			
117	761WPA0473	HOLDER SPEAKER-L			
118	761WPA0474	HOLDER SPEAKER-R			
119	761WPA0477	COVER HINGE			
120	761WPA0478	HOLDER PANEL			
121	761WSA0466	ANGLE HINGE			
122	899RFC21V0	HOLDER CORD			
123	761WSA0459	SHIELD IC			
124	800WR00085	SHEET SILICONE			
125	726000A073	SHEET CAUTION			
126	735WPB0374	BUTTON FRAME DVD			
127	761WSA0486	ANGLE DVD-1			
128	7230008343	POP LABEL DVD			
129	7240001126	SHEET PC			
130	743WKA0058	SPRING EARTH			
131	752WSA0672	SHIELD DVD			
132	800WB0A017	FIBER WASHER			
133	800WFA0056	CUSHION 25x50xT4			
134	800WQ00127	FELT SHEET			
135	8965TS101B	CUSHION W10/H6/L15			
136	8965TS1017	CUSHION 65TS10-10 17.5x20x14			
137	8965TS1210	CUSHION W10/H12/L10			
138	8965TS202A	CUSHION 65TS20-20 20x15x12			

## DVD DECK REPLACEMENT PARTS LIST

REF. NO.	PART NO.	DESCRIPTION	
△ 600	A5Z001B650	DVD MECHA ASS'Y	A5Z001B650
601	92SBB0033A	LOADER SUB ASS'Y	DLM1D29-31
602	92AAA0017A	FEED RACK ASS'Y	
603	92P100088A	GEAR,MOTOR	
604	92P100117A	GEAR,MIDDLE	
605	92P200017A	INSULATOR, F	
606	92P200018A	INSULATOR, R	
607	92P100116A	GEAR,FEED	
608	800WFAA008	CUSHION C	
701	92P700007A	SCREW,GEAR FEED	
702	814011723U	SCREW,PAN	M1.7x2.3 P3
703	816112080U	SEMS.TAP TITE(P) PAN W10	2x8
704	813381750U	SCREW,T-TITE(B)CAMERA PAN	M1.7x5.0 P3
705	811022080U	SCREW,TAP TITE(P) BIND	2x8
CD2001	122J401603	CORD JUMPER	127000-2933
CD2301	122H062102	CORD JUMPER	2H062102
△ M2602	1515S98004	MOTOR	BCZ3B05
PCB640	A5X002C640	SW PCB ASS'Y	DED020A
SW2	0500101036	PUSH SWITCH	ESE22MH22

# ELECTRICAL REPLACEMENT PARTS LIST

REF. NO.	PART NO.	DESCRIPTION	CODE
<b>REMOCON PCB ASS'Y</b>			
*** PCB ***			
PCBDA0	A5Z203EDA0	REMOCON PCB ASS'Y	CEF275A
*** DIODES ***			
D2201	0021E9Q010	LED	LTL-1BEFJ-002A
*** CONNECTORS ***			
CP2201	069S250639	CONNECTOR PCB SIDE	A2001WR2-5P
*** OTHERS ***			
OS2201	077A033001	REMOTE RECEIVER	ROM-V338TAO
<b>DIGITAL PCB ASS'Y</b>			
*** PCB ***			
PCBDH0	A5Z203EDH0	DIGITAL PCB ASS'Y	CEF276A
*** CAPACITORS ***			
C1007	E7EPU3101M	CE	100 UF 25V
C1012	E7ESF4102M	CE	1000 UF 35V
C1013	E7EPF3102M	CE	1000 UF 25V
C1014	E7EPF3102M	CE	1000 UF 25V
*** DIODES ***			
D101	DD7R20S300	DIODE SCHOTTKY BARRIER	RB520S-30-TE61
D102	DD7R20S300	DIODE SCHOTTKY BARRIER	RB520S-30-TE61
D103	DD7R20S300	DIODE SCHOTTKY BARRIER	RB520S-30-TE61
D105	DD7R20S300	DIODE SCHOTTKY BARRIER	RB520S-30-TE61
D107	DE7RB5R62B	DIODE ZENER	UDZS5.6B TE-17
D109	DE7RB5R62B	DIODE ZENER	UDZS5.6B TE-17
D701	DE7RB5R62B	DIODE ZENER	UDZS5.6B TE-17
D702	DE7RB1202B	DIODE ZENER	UDZS12B TE-177
D705	DE7RB1202B	DIODE ZENER	UDZS12B TE-177
D706	DE7RB1202B	DIODE ZENER	UDZS12B TE-177
D707	DE7RB1202B	DIODE ZENER	UDZS12B TE-177
D708	DE7RB1202B	DIODE ZENER	UDZS12B TE-177
D709	DE7RB1202B	DIODE ZENER	UDZS12B TE-177
D710	DE7RB1202B	DIODE ZENER	UDZS12B TE-177
D711	DE7RB1202B	DIODE ZENER	UDZS12B TE-177
D712	DE7RB1202B	DIODE ZENER	UDZS12B TE-177
D713	DE7RB1202B	DIODE ZENER	UDZS12B TE-177
D714	DE7RB1202B	DIODE ZENER	UDZS12B TE-177
D715	DE7RB1202B	DIODE ZENER	UDZS12B TE-177
D1001	DD7R20S300	DIODE SCHOTTKY BARRIER	RB520S-30-TE61
D2403	DD7R20S300	DIODE SCHOTTKY BARRIER	RB520S-30-TE61
D2801	D28R11FS20	DIODE	EC11FS2-TE12L
D3403	D28R11FS20	DIODE	EC11FS2-TE12L
D3406	D28R1QS040	DIODE	EC31QS04-TE12L
D3600	DD7R20S300	DIODE SCHOTTKY BARRIER	RB520S-30-TE61
D3601	D77R1A1R10	DIODE VARISTA	AVRL161A1R1NT
D3603	D77R1A1R10	DIODE VARISTA	AVRL161A1R1NT
D3605	DD7R60L400	DIODE SCHOTTKY	RB160L-40-TE25
D3630	DE7RB5R62B	DIODE ZENER	UDZS5.6B TE-17
*** ICS ***			
IC101	I55F06088A	IC	OEC6088A
IC102	S5Z203EE01	MEMORY DATA	AT24C02BN-10SU-1.8

IC701	I01F05853B	IC	AN15853B-E1
IC702	I5CJ031570	IC	SN74LVC1G3157DCKR
IC703	I0QF025840	IC	NJM2584AM(TE1)
IC704	I0UF015010	IC	MM1501XNRE
IC705	I0UF015010	IC	MM1501XNRE
IC901	I01FF58320	IC	AN5832SA-E1V
IC1001	I0FSP7808B	IC	AN17808B
IC1002	I5AFF11730	IC	NJW1173V(TE1)
IC1003	I0UF015010	IC	MM1501XNRE
IC1004	I0UF015010	IC	MM1501XNRE
IC2401	IFNMEX2420	IC	X242
IC2402	IGGM005120	IC	HYB18T512161BF-25
IC2404	I0QF0580V0	IC	NJM4580V(TE1)
IC2405	IF8F0385A0	IC	ICSV385AGLFT
IC2407	S5Z203EF02	MEMORY DATA	HY27US08281A-TPCB
IC2408	S5Z203EE02	MEMORY DATA	BR24L64F-WE2
IC2801	I03D979950	IC	LA7995M-TLM
IC3401	I0GF95ZN10	IC	PQ035ZN1HZPH
IC3402	I07F078200	IC	BD7820FP-E2
IC3403	I57F035040	IC	BD3504FVM
IC3404	I07F0C0WFO	IC	BA00BC0WFP-E2
IC3405	I07F078200	IC	BD7820FP-E2
IC3408	I07F078200	IC	BD7820FP-E2
IC3601	IG1F090250	IC	SII9025CTU
IC3602	S5Z203EE03	MEMORY DATA	BR24L02F-WE2
IC6601	IFSK035830	IC	MST3583M-LF-110

\*\*\* TRANSISTORS \*\*\*

Q101	TPAAA05001	COMPOUND TRANSISTOR	KRA101SRTK
Q102	TPAAA05001	COMPOUND TRANSISTOR	KRA101SRTK
Q701	TAAA1504SY	TRANSISTOR SILICON	KTA1504S_Y_RTK
Q702	TAAA1504SY	TRANSISTOR SILICON	KTA1504S_Y_RTK
Q703	TCAA3875SY	TRANSISTOR SILICON	KTC3875S_Y_RTK
Q704	TAAA1504SY	TRANSISTOR SILICON	KTA1504S_Y_RTK
Q705	TCAA3875SY	TRANSISTOR SILICON	KTC3875S_Y_RTK
Q1001	TCAA3875SY	TRANSISTOR SILICON	KTC3875S_Y_RTK
Q1002	TPAAA05001	COMPOUND TRANSISTOR	KRA101SRTK
Q1003	TCAA3875SY	TRANSISTOR SILICON	KTC3875S_Y_RTK
Q1004	TCAA3875SY	TRANSISTOR SILICON	KTC3875S_Y_RTK
Q1005	TNAAC05002	COMPOUND TRANSISTOR	KRC103SRTK
Q1007	TPAAA05001	COMPOUND TRANSISTOR	KRA101SRTK
Q1008	TCAA3875SY	TRANSISTOR SILICON	KTC3875S_Y_RTK
Q2401	T43A938000	FET	2SK393800L
Q2402	T43A938000	FET	2SK393800L
Q2403	T43A938000	FET	2SK393800L
Q2404	T43A938000	FET	2SK393800L
Q3401	TNAAC05002	COMPOUND TRANSISTOR	KRC103SRTK
Q3402	T77J011320	TRANSISTOR SILICON	2SB1132T100(Q,R)
Q3405	TJ7M65N030	FET	RSS065N03FL16TB
Q3406	T77J011320	TRANSISTOR SILICON	2SB1132T100(Q,R)
Q3407	TNAAB05003	COMPOUND TRANSISTOR	KRC102SRTK
Q3408	TNAAB05003	COMPOUND TRANSISTOR	KRC102SRTK
Q3410	TJ7T35P030	FET	RSQ035P03
Q3603	T43A938000	FET	2SK393800L
Q3604	T43A938000	FET	2SK393800L
Q3606	TCAA3875SY	TRANSISTOR SILICON	KTC3875S_Y_RTK
Q3618	T43A938000	FET	2SK393800L
Q4201	TCAA3875SY	TRANSISTOR SILICON	KTC3875S_Y_RTK
Q4202	TCAA3875SY	TRANSISTOR SILICON	KTC3875S_Y_RTK
Q4203	TCAA3875SY	TRANSISTOR SILICON	KTC3875S_Y_RTK
Q4205	TCAA3875SY	TRANSISTOR SILICON	KTC3875S_Y_RTK
Q4209	TCAA3875SY	TRANSISTOR SILICON	KTC3875S_Y_RTK
Q4210	T43A938000	FET	2SK393800L
Q4211	T43A938000	FET	2SK393800L
Q6601	TNAAB05003	COMPOUND TRANSISTOR	KRC102SRTK

\*\*\* COILS \*\*\*

B103	024HC51023	CORE,BEADS	FCM1608KF-102T02
B104	024HC51023	CORE,BEADS	FCM1608KF-102T02
B105	024HC51023	CORE,BEADS	FCM1608KF-102T02
B109	024HC51023	CORE,BEADS	FCM1608KF-102T02

B701	024HC51513	CORE,BEADS	FCM1608KF-151T06
B702	024HC51513	CORE,BEADS	FCM1608KF-151T06
B703	024HC51513	CORE,BEADS	FCM1608KF-151T06
B704	024HC51513	CORE,BEADS	FCM1608KF-151T06
B705	024HC56005	CORE,BEADS	FCM1608CF-600T06
B706	024HC51023	CORE,BEADS	FCM1608KF-102T02
B708	024HC51023	CORE,BEADS	FCM1608KF-102T02
B709	024HC51023	CORE,BEADS	FCM1608KF-102T02
B710	024HC51023	CORE,BEADS	FCM1608KF-102T02
B711	024HC51023	CORE,BEADS	FCM1608KF-102T02
B712	024HC51023	CORE,BEADS	FCM1608KF-102T02
B713	024HC51023	CORE,BEADS	FCM1608KF-102T02
B714	024HC51023	CORE,BEADS	FCM1608KF-102T02
B715	024HC51023	CORE,BEADS	FCM1608KF-102T02
B716	024HC51023	CORE,BEADS	FCM1608KF-102T02
B717	024HC51023	CORE,BEADS	FCM1608KF-102T02
B718	024HC51023	CORE,BEADS	FCM1608KF-102T02
B719	024HC51023	CORE,BEADS	FCM1608KF-102T02
B720	024HC51023	CORE,BEADS	FCM1608KF-102T02
B721	024HC51023	CORE,BEADS	FCM1608KF-102T02
B722	024HC51023	CORE,BEADS	FCM1608KF-102T02
B723	024HC51023	CORE,BEADS	FCM1608KF-102T02
B1001	024HC51513	CORE,BEADS	FCM1608KF-151T06
B1004	024HC51816	CORE,BEADS	HCB1608KF-181T20
B1005	024HC51816	CORE,BEADS	HCB1608KF-181T20
B1009	024HC51513	CORE,BEADS	FCM1608KF-151T06
B2401	024HC51513	CORE,BEADS	FCM1608KF-151T06
B2402	024HC51513	CORE,BEADS	FCM1608KF-151T06
B2403	024HC51513	CORE,BEADS	FCM1608KF-151T06
B2404	024HC51513	CORE,BEADS	FCM1608KF-151T06
B2405	024HC51513	CORE,BEADS	FCM1608KF-151T06
B2406	024HC51513	CORE,BEADS	FCM1608KF-151T06
B2407	024HC56013	CORE,BEADS	FCM1608KF-601T02
B2408	024HC51513	CORE,BEADS	FCM1608KF-151T06
B2409	024HC56013	CORE,BEADS	FCM1608KF-601T02
B2418	024HC51513	CORE,BEADS	FCM1608KF-151T06
B2419	024HC51513	CORE,BEADS	FCM1608KF-151T06
B2420	024HC51513	CORE,BEADS	FCM1608KF-151T06
B2421	024HC51513	CORE,BEADS	FCM1608KF-151T06
B2422	024HC51513	CORE,BEADS	FCM1608KF-151T06
B2423	024HC51513	CORE,BEADS	FCM1608KF-151T06
B2430	024HC51513	CORE,BEADS	FCM1608KF-151T06
B2501	024HC51513	CORE,BEADS	FCM1608KF-151T06
B2502	024HC51513	CORE,BEADS	FCM1608KF-151T06
B2503	024HC51513	CORE,BEADS	FCM1608KF-151T06
B2504	024HC51513	CORE,BEADS	FCM1608KF-151T06
B2801	024HC51023	CORE,BEADS	FCM1608KF-102T02
B2802	024HC51023	CORE,BEADS	FCM1608KF-102T02
B2803	024HC51023	CORE,BEADS	FCM1608KF-102T02
B2804	024HC51023	CORE,BEADS	FCM1608KF-102T02
B3402	024HC13914	CORE,BEADS	HCB3216KF-391T20
B3403	024HC51023	CORE,BEADS	FCM1608KF-102T02
B3404	024HC51023	CORE,BEADS	FCM1608KF-102T02
B3405	024HC51023	CORE,BEADS	FCM1608KF-102T02
B3406	024HC13914	CORE,BEADS	HCB3216KF-391T20
B3407	024HC13914	CORE,BEADS	HCB3216KF-391T20
B3408	024HC13914	CORE,BEADS	HCB3216KF-391T20
B3409	024HC13914	CORE,BEADS	HCB3216KF-391T20
B3410	024HC13914	CORE,BEADS	HCB3216KF-391T20
B3601	024HC51816	CORE,BEADS	HCB1608KF-181T20
B3602	024HC51816	CORE,BEADS	HCB1608KF-181T20
B3603	024HC51816	CORE,BEADS	HCB1608KF-181T20
B3604	024HC51816	CORE,BEADS	HCB1608KF-181T20
B3605	024HC56005	CORE,BEADS	FCM1608CF-600T06
B3610	024HC51816	CORE,BEADS	HCB1608KF-181T20
B3611	024HC51816	CORE,BEADS	HCB1608KF-181T20
B3613	024HC51816	CORE,BEADS	HCB1608KF-181T20
B4201	024NC51021	CORE,BEADS	EBMS160808A102_RDC45
B4202	024HC56005	CORE,BEADS	FCM1608CF-600T06
B4203	024NC51021	CORE,BEADS	EBMS160808A102_RDC45
B4204	024HC56005	CORE,BEADS	FCM1608CF-600T06
B4205	024HC56005	CORE,BEADS	FCM1608CF-600T06
B4206	024NC51021	CORE,BEADS	EBMS160808A102_RDC45

B6601	024HC51513	CORE,BEADS	FCM1608KF-151T06
B6602	024HC51513	CORE,BEADS	FCM1608KF-151T06
B6603	024HC51513	CORE,BEADS	FCM1608KF-151T06
B6604	024HC51513	CORE,BEADS	FCM1608KF-151T06
B6605	024HC51513	CORE,BEADS	FCM1608KF-151T06
L701	0216S8470K	COIL	47 UH
L702	0216S8470K	COIL	47 UH
L2401	0216SD2R2J	COIL	2.2 UH
L2403	0216SD2R2J	COIL	2.2 UH
L2802	0216SD330J	COIL	33 UH
L3601	02D6000068	COIL CHOKE	ACM2012D-900-2P-T00
L3602	02D6000068	COIL CHOKE	ACM2012D-900-2P-T00
L3603	02D6000068	COIL CHOKE	ACM2012D-900-2P-T00
L3604	02D6000068	COIL CHOKE	ACM2012D-900-2P-T00
L4203	0216SD220J	COIL	22 UH
L4204	0216SD220J	COIL	22 UH
*** JACKS ***			
J701	060K411053	RCA JACK	AV3-13P2-31S1
J702	060R431035	RCA JACK	RCA-349-00C-02
J703	060R431035	RCA JACK	RCA-349-00C-02
J706	063Y000087	JACK PLATE	R102-D04KAF-06
J4201	060J131019	HEADPHONE JACK	MSJ-2000B_AG(O87)
*** CONNECTORS ***			
CP101	069S240629	CONNECTOR PCB SIDE	A2001WV2-4P
CP102	069S260629	CONNECTOR PCB SIDE	A2001WV2-6P
CP103	069S230639	CONNECTOR PCB SIDE	A2001WR2-3P
CP106	069S250629	CONNECTOR PCB SIDE	A2001WV2-5P
CP701	069S2G0639	CONNECTOR PCB SIDE	A2001WR2-16P
CP1001	069S140419	CONNECTOR PCB SIDE	A2502WV2-4P
CP2401	069AAA1009	CONNECTOR PCB SIDE	YKF45-0036N
CP2402	069S290629	CONNECTOR PCB SIDE	A2001WV2-9P
CP3401	06977NM020	CONNECTOR PCB SIDE	127301123K2
CP3601	0694YJ3018	CONNECTOR PCB SIDE	1903015-3
*** CRYSTAL & CERAMIC OSCILLATORS ***			
X101	100DT01601	CRYSTAL	SMD-49
X2401	100DT02503	CRYSTAL	SMD-49
X3602	100DT02801	CRYSTAL	SMD-49
X6601	100DT01407	CRYSTAL	SMD-49
*** TUNER ***			
TU2801	0164100023	DIGITAL TUNER	ENG36E03KRF
*** NETWORKS ***			
NR2401	110P4220M6	R,NETWORK	4D02WGJ0220TCE
NR2402	110P4220M6	R,NETWORK	4D02WGJ0220TCE
NR2403	110P4220M6	R,NETWORK	4D02WGJ0220TCE
NR2404	110P4220M6	R,NETWORK	4D02WGJ0220TCE
NR2405	110P4220M6	R,NETWORK	4D02WGJ0220TCE
NR2406	110P4220M6	R,NETWORK	4D02WGJ0220TCE
NR2407	110P4220M6	R,NETWORK	4D02WGJ0220TCE
NR2408	110P4470M5	R,NETWORK	4D02WGJ0470TCE
NR2409	110P4470M5	R,NETWORK	4D02WGJ0470TCE
NR3603	110P4330M5	R,NETWORK	4D02WGJ0330TCE
NR3604	110P4330M5	R,NETWORK	4D02WGJ0330TCE
NR3605	110P4330M5	R,NETWORK	4D02WGJ0330TCE
NR3606	110P4330M5	R,NETWORK	4D02WGJ0330TCE
NR6601	110P4330M5	R,NETWORK	4D02WGJ0330TCE
NR6602	110P4330M5	R,NETWORK	4D02WGJ0330TCE
NR6603	110P4330M5	R,NETWORK	4D02WGJ0330TCE
NR6604	110P4330M5	R,NETWORK	4D02WGJ0330TCE
NR6605	110P4330M5	R,NETWORK	4D02WGJ0330TCE
NR6606	110P4330M5	R,NETWORK	4D02WGJ0330TCE
NR6607	110P4330M5	R,NETWORK	4D02WGJ0330TCE

\*\*\* OTHERS \*\*\*

CP2407	06G3VWT01A	CONNECTOR PCB SIDE	20389-Y30E
CP4201	06G2S21501	CONNECTOR PCB SIDE	D229FD015G107BY
SH3401	126D000044	TERMINAL PIN	YQ-36
SH3402	126D000044	TERMINAL PIN	YQ-36
SH3403	126D000044	TERMINAL PIN	YQ-36
SH3404	126D000044	TERMINAL PIN	YQ-36
SH3405	126D000044	TERMINAL PIN	YQ-36

DVD MT PCB ASS'Y

\*\*\* PCB \*\*\*

PCB130	A5Z203E130	DVD MT PCB ASS'Y	DMF093A
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\*\*\* DIODES \*\*\*

D2303	DD7R0S3550	DIODE SILICON	1SS355 TE-17
D2304	DD7R0S3550	DIODE SILICON	1SS355 TE-17
D3001	DD1R24D500	DIODE SILICON	MA24D5000B
D3002	DD1R24D500	DIODE SILICON	MA24D5000B
D3003	DD1R24D500	DIODE SILICON	MA24D5000B
D4002	DD7R0S3550	DIODE SILICON	1SS355 TE-17
D4003	DD7R0S3550	DIODE SILICON	1SS355 TE-17
D4005	DD7R0S3550	DIODE SILICON	1SS355 TE-17
D4008	DD7R0S3550	DIODE SILICON	1SS355 TE-17
D8510	DD7R0S3550	DIODE SILICON	1SS355 TE-17

\*\*\* ICS \*\*\*

IC2301	I03FV65650	IC	LA6565VR-TLM-E
IC3001	I07F097430	IC	BA9743AFV-E2
IC3002	I0GF91ZPH0	IC	PQ070XZ01ZPH
IC3003	I1KF98D050	IC	KIA78D05F
IC4001	ICQK069660	IC	ZR36966ELCG-D
IC4005	IF9J0164AG	IC	M12L64164A-7TG
IC4007	S5Z203EF01	MEMORY DATA	SST39VF1601-70-4C-EKE
IC8501	I0QF045650	IC	NJM4565M(TE1)

\*\*\* TRANSISTORS \*\*\*

Q2301	TAAA1505SY	TRANSISTOR SILICON	KTA1505S-Y-RTK/P
Q2302	TAAA1544T0	TRANSISTOR SILICON	KTA1544T-RTK/P
Q3001	TAAA01664Y	TRANSISTOR SILICON	KTA1664-Y-RTF/P
Q3002	TNAAB05003	COMPOUND TRANSISTOR	KRC102SR TK
Q3003	TCAA3875SY	TRANSISTOR SILICON	KTC3875S_Y_RTK
Q3004	TAAA1505SY	TRANSISTOR SILICON	KTA1505S-Y-RTK/P
Q3005	TCAA3875SY	TRANSISTOR SILICON	KTC3875S_Y_RTK
Q3006	TAAA1505SY	TRANSISTOR SILICON	KTA1505S-Y-RTK/P
Q3007	TJ5M081090	FET	TPC8109(T2LORION_Q)
Q3008	TJ5M081090	FET	TPC8109(T2LORION_Q)

\*\*\* COILS \*\*\*

B2301	0246C51024	CORE,BEADS	MMZ1608R102CT
B2302	0246C51024	CORE,BEADS	MMZ1608R102CT
B2304	0246C51024	CORE,BEADS	MMZ1608R102CT
B2305	0246C51024	CORE,BEADS	MMZ1608R102CT
B3001	024BC5121J	CORE,BEADS	BLM18PG121SN1D
B4001	0246C51024	CORE,BEADS	MMZ1608R102CT
B4002	0246C51024	CORE,BEADS	MMZ1608R102CT
B4003	0246C51024	CORE,BEADS	MMZ1608R102CT
B4004	0246C51024	CORE,BEADS	MMZ1608R102CT
B4005	0246C51024	CORE,BEADS	MMZ1608R102CT
B4006	0246C51024	CORE,BEADS	MMZ1608R102CT
B4007	0246C51024	CORE,BEADS	MMZ1608R102CT
B4008	0246C51024	CORE,BEADS	MMZ1608R102CT
B4009	0246C51024	CORE,BEADS	MMZ1608R102CT
B4010	0246C51024	CORE,BEADS	MMZ1608R102CT
B4011	0246C51024	CORE,BEADS	MMZ1608R102CT
B4012	0246C51024	CORE,BEADS	MMZ1608R102CT



B4013	0246C51024	CORE,BEADS	MMZ1608R102CT
B4014	0246C51024	CORE,BEADS	MMZ1608R102CT
B4015	0246C51024	CORE,BEADS	MMZ1608R102CT
B4016	0246C51024	CORE,BEADS	MMZ1608R102CT
L3001	02120K101M	COIL	100 UH
L3002	02120K101M	COIL	100 UH
L3003	0216SD2R2J	COIL	2.2 UH
L3004	02167E220K	COIL	22 UH
L3005	0216SD2R2J	COIL	2.2 UH
L8502	0216SD1R0J	COIL	1 UH
L8504	0216SD1R0J	COIL	1 UH
*** CONNECTORS ***			
CP2301	069KYOT159	CONNECTOR PCB SIDE	LD07T2-24ND-03
CP2302	069EV53030	CONNECTOR PCB SIDE	00_6232_005_006_800+
CP2303	069EV63030	CONNECTOR PCB SIDE	00_6232_006_006_800+
CP3001	069S240639	CONNECTOR PCB SIDE	A2001WR2-4P
CP8501	069S2G0639	CONNECTOR PCB SIDE	A2001WR2-16P
*** CRYSTAL & CERAMIC OSCILLATORS ***			
X4001	100GT02720	CRYSTAL	B27000C005
*** FUSES ***			
F3001	083LA05007	FUSE	1206FA5A-T
*** OTHERS ***			
SH2301	126D000044	TERMINAL PIN	YQ-36
SH3001	126D000044	TERMINAL PIN	YQ-36
SH4001	126D000044	TERMINAL PIN	YQ-36
SH8501	126D000044	TERMINAL PIN	YQ-36
<b>POWER PCB ASS'Y</b>			
*** PCB ***			
PCB240	A5Z203E240	POWER PCB ASS'Y	CEF273A
*** RESISTORS ***			
R403	R3K28B1R8J	R,METAL OXIDE	1.8 OHM 3W
R404	RC31X1155J	RC	1.5M OHM 1W
R406	R3K681S22J	R,METAL OXIDE	0.022 OHM 1W
R412	R63881R22J	R,FUSE	0.22 OHM 1W
R416	R655842R2J	R,FUSE	2.2 OHM 1/4W
R466	R5X2AD151J	R,CEMENT	150 OHM 5W
R473	R3K78A681J	R,METAL OXIDE	680 OHM 2W
R475	R3K78A681J	R,METAL OXIDE	680 OHM 2W
R494	R3K78A681J	R,METAL OXIDE	680 OHM 2W
R497	R65581010J	R,FUSE	1 OHM 1W
R533	R3K28B473J	R,METAL OXIDE	47K OHM 3W
*** CAPACITORS ***			
C402	P2122B334M	CMP	0.33 UF 275V ECQUL
C403	E71JFC391D	CE	390 UF 200V
C404	E71JFC391D	CE	390 UF 200V
C406	CD39E0ME3M	CC	0.0015UF 250V
C423	P4NAE6823H	CMPP	0.082 UF 800V
C424	E8E6FC470M	CE	47 UF 200V
C427	CD39E0MQ2K	CC	470 PF 250V
C432	E7EYF2102M	CE	1000 UF 16V
C433	E7EYF4471M	CE	470 UF 35V
C434	E7EYF4102M	CE	1000 UF 35V
C435	E7EYF3102M	CE	1000 UF 25V
C436	CD39E0ME3M	CC	0.0015UF 250V
C438	E7EYF4102M	CE	1000 UF 35V
C440	E7EYF0222M	CE	2200 UF 6.3V
C448	P2122B104M	CMP	0.1 UF 275V ECQUL

C449	E7EYF2102M	CE	1000 UF 16V
C453	E7EYF2102M	CE	1000 UF 16V
C463	CD39E0M13M	CC	0.001 UF 250V

\*\*\* DIODES \*\*\*

D401	D4AT01H3E0	DIODE RECTIFIER	1H3-E
D402	D6E027110A	DIODE VARISTA	ENE271D-10A
D403	DOU044520M	DIODE VARISTA	DE37-452M-S00B
D404	D6CE24110A	DIODE VARISTA	ENE241D-10A-Q6
D406	D28R1QS040	DIODE	EC31QS04-TE12L
D407	D28R1QS040	DIODE	EC31QS04-TE12L
D409	D4CKN54060	DIODE SILICON	1N5406FL-6737
D410	D4CKN54060	DIODE SILICON	1N5406FL-6737
D411	DD7R0S3550	DIODE SILICON	1SS355 TE-17
D412	D97U03R91B	DIODE,ZENER	MTZJ3.9B T-77
D413	DD7R0S3550	DIODE SILICON	1SS355 TE-17
D414	DD7R0S3550	DIODE SILICON	1SS355 TE-17
D415	DE7RB3R92B	DIODE ZENER	UDZS3.9B TE-17
D416	D97U02001B	DIODE,ZENER	MTZJ20B T-77
D419	DD7R0S3550	DIODE SILICON	1SS355 TE-17
D420	DD7R0S3550	DIODE SILICON	1SS355 TE-17
D421	DD7R0S3550	DIODE SILICON	1SS355 TE-17
D422	DD7R60M900	DIODE SCHOTTKY BARRIER	RB160M-90TR
D423	DD7R0S3550	DIODE SILICON	1SS355 TE-17
D424	D4AT01H3E0	DIODE RECTIFIER	1H3-E
D425	D2WYN40050	DIODE SILICON	1N4005-EIC
D426	D1VT001330	DIODE,SILICON	1SS133T-77
D427	D2WYN40050	DIODE SILICON	1N4005-EIC
D428	DD7R0S3550	DIODE SILICON	1SS355 TE-17
D429	DD7R0S3550	DIODE SILICON	1SS355 TE-17
D430	D2WYN40050	DIODE SILICON	1N4005-EIC
D431	D2WYN40050	DIODE SILICON	1N4005-EIC
D432	D2WXR03AM0	DIODE SILICON	RU3AM-EIC
D433	D4AT01H3E0	DIODE RECTIFIER	1H3-E
D434	D2LKSR3400	DIODE SCHOTTKY	SR340-004
D435	D2CFC91020	DIODE SILICON	ERC91-02J11SC
D437	D2CA2C10R0	DIODE SCHOTTKY BARRIER	YG862C10R
D438	DD7R0S3550	DIODE SILICON	1SS355 TE-17
D439	D97U03001B	DIODE,ZENER	MTZJ30B T-77
D440	D2CA2C10R0	DIODE SCHOTTKY BARRIER	YG862C10R
D442	D4AT01H3E0	DIODE RECTIFIER	1H3-E
D443	D2LKSR3400	DIODE SCHOTTKY	SR340-004
D445	D97U01501B	DIODE,ZENER	MTZJ15B T-77
D446	D1VT001330	DIODE,SILICON	1SS133T-77
D447	D1VT001330	DIODE,SILICON	1SS133T-77
D448	D1VT001330	DIODE,SILICON	1SS133T-77
D449	D1VT001330	DIODE,SILICON	1SS133T-77
D450	D97U03R31B	DIODE,ZENER	MTZJ3.3B T-77
D455	D2LXSR2400	DIODE SCHOTTKY	SR240-F
D456	D1VT001330	DIODE,SILICON	1SS133T-77
D459	D97U02201B	DIODE ZENER	MTZJ22B T-77
D460	D4AT01H3E0	DIODE RECTIFIER	1H3-E
D461	D97U01101B	DIODE,ZENER	MTZJ11B T-77
D465	D2LXSR2400	DIODE SCHOTTKY	SR240-F

\*\*\* ICS \*\*\*

IC401	I2GT050600	IC	MP2A5060
IC402	I5SD0P2F40	IC	MIP2F4
IC403	I1KJ9A431A	IC	KIA431A-AT
IC404	I1KJ9A431A	IC	KIA431A-AT
IC405	I0GA9XF020	IC	PQ070XF02SZH
IC406	I1LF010150	IC	AL1015
IC407	I03T057790	IC	LA5779-E
IC408	000220002W	PHOTO COUPLER	PS2561AL1-1-V(W)
IC409	000220002W	PHOTO COUPLER	PS2561AL1-1-V(W)
IC410	000220002W	PHOTO COUPLER	PS2561AL1-1-V(W)

\*\*\* TRANSISTORS \*\*\*

Q401	TCATC31980	TRANSISTOR,SILICON	KTC3198-AT(Y,GR)
Q402	TCAA3875SY	TRANSISTOR SILICON	KTC3875S_Y_RTK

Q403	TCAA3875SY	TRANSISTOR SILICON	KTC3875S_Y_RTK
Q404	TCAA3875SY	TRANSISTOR SILICON	KTC3875S_Y_RTK
Q405	TCAT03209Y	TRANSISTOR SILICON	KTC3209_Y-AT
Q406	TCAA3875SY	TRANSISTOR SILICON	KTC3875S_Y_RTK
Q407	TAAT01281Y	TRANSISTOR SILICON	KTA1281_Y
Q408	TCAA3875SY	TRANSISTOR SILICON	KTC3875S_Y_RTK
Q409	TCAA3875SY	TRANSISTOR SILICON	KTC3875S_Y_RTK
Q410	TJ7M50P030	FET	RSS050P03_TB
Q412	TCAA3875SY	TRANSISTOR SILICON	KTC3875S_Y_RTK
Q415	TAAA1504SY	TRANSISTOR SILICON	KTA1504S_Y_RTK
Q416	TAAA1504SY	TRANSISTOR SILICON	KTA1504S_Y_RTK
Q417	TAAT01241Y	TRANSISTOR SILICON	KTA1241_Y-AT
Q418	TNAA050001	COMPOUND TRANSISTOR	KRC101S-RTK
Q420	TCAA3875SY	TRANSISTOR SILICON	KTC3875S_Y_RTK
Q421	TAAT01281Y	TRANSISTOR SILICON	KTA1281_Y
Q422	TBA0011510	TRANSISTOR SILICON	KTb1151
Q423	TCAA3875SY	TRANSISTOR SILICON	KTC3875S_Y_RTK
Q424	TNAAB05003	COMPOUND TRANSISTOR	KRC102SRTK
Q425	TNAAB05003	COMPOUND TRANSISTOR	KRC102SRTK
Q433	TCAA3875SY	TRANSISTOR SILICON	KTC3875S_Y_RTK
Q434	T25F035630	FET	2SK3563(ORION_Q)
*** COILS ***			
B401	024HT03553	CORE,BEADS	W5RH3.5X5X1.0
B402	024HC51816	CORE,BEADS	HCB1608KF-181T20
B403	024HC51816	CORE,BEADS	HCB1608KF-181T20
B404	024HT03553	CORE,BEADS	W5RH3.5X5X1.0
L401	029X000129	COIL,LINE FILTER	SS30V-R300071
L402	029X000129	COIL,LINE FILTER	SS30V-R300071
L405	02167E220K	COIL	22 UH
L408	02130G470L	COIL 7313NH-470L	47 UH
L409	02130G330M	COIL 7313NH-471L	33 UH
L411	02167E220K	COIL 7313NH-472L	22 UH
L413	02167E220K	COIL 7313NH-473L	22 UH
L415	02167E220K	COIL 7313NH-474L	22 UH
*** TRANSFORMERS ***			
T401	0487420014	TRANSFORMER,SWITCHING	87420014
T402	0481190074	TRANSFORMER,SWITCHING	81190074
*** JACKS ***			
J401	064Q1A0003	JACK,AC	CCT2302-0911
*** CONNECTORS ***			
CP401	069D01001A	CONNECTOR PCB SIDE	003P-2100
CP403	069D01001A	CONNECTOR PCB SIDE	003P-2100
CP405	069D01001A	CONNECTOR PCB SIDE	003P-2100
CP406	069S2E0639	CONNECTOR PCB SIDE	A2001WR2-14P
CP408	069D01001A	CONNECTOR PCB SIDE	003P-2100
CP410	069S240629	CONNECTOR PCB SIDE	A2001WV2-4P
CP411	06977N001B	CONNECTOR PCB SIDE	TWG-P23P-B1
CP413	069D01001A	CONNECTOR PCB SIDE	003P-2100
*** FUSES ***			
F401	081PC6R305	FUSE	51MS063L
F404	0835C01603	MICRO FUSE	20N_1600FS
FH401	06710T0009	HOLDER,FUSE	EYF-52BCY
FH402	06710T0009	HOLDER,FUSE	EYF-52BCY
*** RELAYS ***			
RY401	0560V50119	RELAY	ALKS329 A60
*** THERMISTOR ***			
TH401	DSQ0VE4R0L	THERMISTOR	4D2-18LCS

\*\*\* OTHERS \*\*\*

EL2401	124116281A	EYE LET	XRY16X28BD
EL2402	124120301A	EYE LET	XRY20X30BD
SH401	126D000044	TERMINAL PIN	YQ-36
SH402	126D000044	TERMINAL PIN	YQ-36
SH403	126D000044	TERMINAL PIN	YQ-36
SH404	126D000044	TERMINAL PIN	YQ-36
SH405	126D000044	TERMINAL PIN	YQ-36
SH406	126D000044	TERMINAL PIN	YQ-36
SH407	126D000044	TERMINAL PIN	YQ-36
SH408	126D000044	TERMINAL PIN	YQ-36

**OPERATION PCB ASS'Y**

\*\*\* PCB \*\*\*

PCB270	A5Z203E270	OPERATION PCB ASS'Y	CEF274A
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\*\*\* SWITCHES \*\*\*

SW2201	0504101T34	SWITCH,TACT	EVQ21505R
SW2202	0504101T34	SWITCH,TACT	EVQ21505R
SW2203	0504101T34	SWITCH,TACT	EVQ21505R
SW2204	0504101T34	SWITCH,TACT	EVQ21505R
SW2205	0504101T34	SWITCH,TACT	EVQ21505R
SW2206	0504101T34	SWITCH,TACT	EVQ21505R

\*\*\* CONNECTORS \*\*\*

CP2203	069S230639	CONNECTOR PCB SIDE	A2001WR2-3P
CP2204	06CU221602	CORD CONNECTOR	CU221602

**OPERATION 2 PCB ASS'Y**

\*\*\* PCB \*\*\*

PCB280	A5Z203E280	OPERATION 2 PCB ASS'Y	DEF132A
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\*\*\* SWITCHES \*\*\*

SW2251	0504101T34	SWITCH,TACT	EVQ21505R
SW2252	0504101T34	SWITCH,TACT	EVQ21505R
SW2253	0504101T34	SWITCH,TACT	EVQ21505R
SW2254	0504101T34	SWITCH,TACT	EVQ21505R
SW2255	0504101T34	SWITCH,TACT	EVQ21505R

\*\*\* CONNECTORS \*\*\*

CP2251	069S220639	CONNECTOR PCB SIDE	A2001WR2-2P
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**AND OTHERS**

\*\*\* CONNECTORS \*\*\*

CD301	06CU143803	CORD CONNECTOR	CU143803
CD403	06CU2E0601	CORD CONNECTOR	CU2E0601
CD2201	06CU255502	CORD CONNECTOR	CU255502
CD2202	06CU233301	CORD CONNECTOR	CU233301
CD3001	06CU240801	CORD CONNECTOR	CU240801
CD7201	06CHRU1301	CORD CONNECTOR	CHRU1301
CD8501	06CU2G2501	CORD CONNECTOR	CU2G2501

\*\*\* AC CORD \*\*\*

CD3805	120Q119905	CORD SET AC	P201-2476-2
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\*\*\* OTHERS \*\*\*

BT001	141R003018	BATTERY,MANGAN	GR6M
BT002	141R003018	BATTERY,MANGAN	GR6M

CUS151	800WFAA007	CUSHION B	
SP1001	070Y056003	SPEAKER	S0412F03
SP1002	070Y056003	SPEAKER	S0412F03
TM101	076B0MR030	TRANSMITTER	ETR0088-010171
V2301	09E4126009	LCD	LK255T3LZ5AZ

#### RESISTOR

RC..... CARBON RESISTOR

#### CAPACITORS

CC..... CERAMIC CAPACITOR  
 CE..... ALUMI ELECTROLYTIC CAPACITOR  
 CP..... POLYESTER CAPACITOR  
 CPP..... POLYPROPYLENE CAPACITOR  
 CPL..... PLASTIC CAPACITOR  
 CMP..... METAL POLYESTER CAPACITOR  
 CMPL..... METAL PLASTIC CAPACITOR  
 CMPP..... METAL POLYPROPYLENE CAPACITOR

# SHARP

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